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Philippines Digital Economy Report 2020

A BETTER NORMAL UNDER COVID-19: DIGITALIZING THE PHILIPPINE ECONOMY NOW

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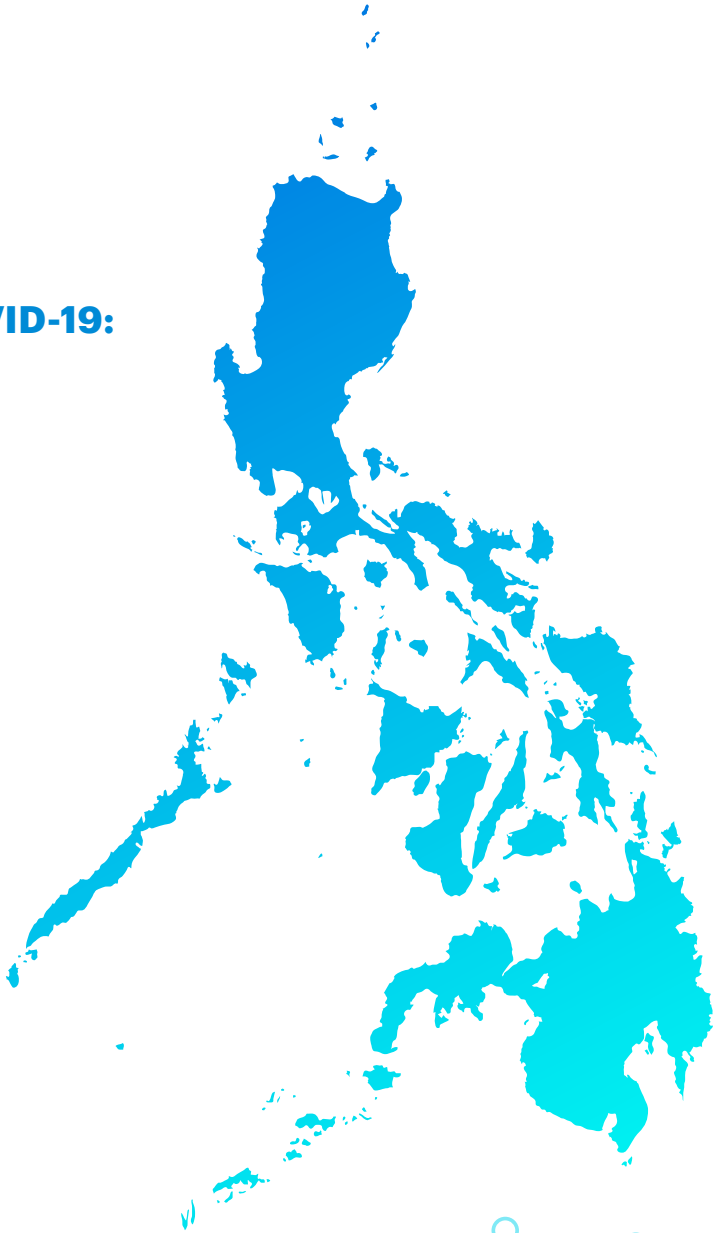

A BETTER NORMAL UNDER COVID-19: DIGITALIZING THE PHILIPPINE ECONOMY NOW

PHILIPPINES DIGITAL ECONOMY REPORT

SEPTEMBER 2020

Macroeconomics, Trade, and Investment Global Practice
Finance, Competitiveness, and Innovation Global Practice
East Asia and Pacific Region

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ACKNOWLEDGMENTS

The Philippines Digital Economy Report is a publication prepared by a World Bank (WB) Philippines team in collaboration with the Philippines Digital Economy Steering Committee coordinated by the National Economic and Development Authority (NEDA). The report assesses the state of the digital economy in the Philippines, and prescribes policy recommendations to increase digital adoption, decrease the digital divide, and address the new normal brought by the COVID-19 pandemic. The intended audience are Philippine policymakers, but the report may serve the needs of a wider audience including the private sector, academia and think tanks, development partners, and WB management and staff.

The report was undertaken with the guidance of the Philippines Digital Economy Steering Committee consisting of key government stakeholders including NEDA, Department of Finance (DOF), Department of Budget and Management (DBM), Department of Trade and Industry (DTI), Department of Information and Communications Technology (DICT), Department of Science and Technology (DOST), Philippine Competition Commission (PCC), Philippine Statistics Authority, and the Bangko Sentral ng Pilipinas (BSP).

On the World Bank side, the report was undertaken with the guidance of Ndiame Diop (Country Director, Brunei, Malaysia, Philippines and Thailand; and former Practice Manager, Macroeconomics, Trade and Investment Global Practice), Mara Warwick (former Country Director), Hassan Zaman (Regional Director, Equitable Growth, Finance and Institutions, East Asia and Pacific), Achim Fock (Operations Manager; and Acting Country Director at report finalization), Cecile Thioro Niang (Practice Manager, Finance, Competitiveness and Innovation Global Practice), Souleymane Coulibaly (Program Leader, Equitable Growth, Finance and Institutions) and Birgit Hansl (former Program Leader).

The study was conducted by a team from multiple Global Practices at the WB. Kevin Chua (Task team leader, Macroeconomics, Trade and Investment Global Practice) and Andres Garcia (co-task team leader, Finance, Competitiveness and Innovation Global Practice) led the preparation of the report. The task team consisted of Natasha Beschorner (Digital Development Global Practice); Isaku Endo, Jin Lee, and Asya Akhlaque (Finance, Competitiveness and Innovation Global Practice); Roberto Martin Galang (International Finance Corporation); Rong Qian, Kevin Thomas Cruz, Bradley Larson, Karen Annette Lazaro and Jessalaine Bacani (Macroeconomics, Trade and Investment Global Practice); and Grace Mirandilla-Santos, Samuel Bautista, Jonathan Pemberton and Romulo Virola (Consultants). The graphic designer and layout artist were Gato Borrero and Emmanuel Rigunan (Consultants). The report was edited by Priya Susan Thomas (Knowledge Management Officer, Documentation and Communications Products). Elysse Miranda, Reinaluz Ona and Maria Consuelo Sy provided excellent administrative support. The External Communications team, consisting of Clarissa Crisostomo David, David Llorico and Stephanie Anne Margallo, prepared the media release, dissemination plan and web-based multimedia presentation.

The report was peer-reviewed by Deepak Mishra (Practice Manager), Richard Record (Lead Economist), Doyle Gallegos (Lead Digital Development Specialist), Smita Kuriakose (Senior Economist), Ana Paula Cusolito (Senior Economist), Sailesh Tiwari (Senior Economist), and Jose Ramon Albert (Philippine Institute for Development Studies). Four chapters of the report have separately undergone technical reviews under the respective Global Practices. The chapter on digital infrastructure was reviewed by Timothy Kelly (Lead Digital Development Specialist) and Doyle Gallegos. The chapter on digital payments was reviewed Harish Natarajan (Lead Financial Sector Specialist) and Marco Nicoli (Senior Financial Sector Specialist). The chapter on logistics of small parcel items was reviewed by Charles Kunaka (Lead Private Sector Specialist), Satya Prasad Sahu (Senior Trade Facilitation Specialist) and Tania Priscilla Gomez (Senior Economist). The chapter on the indirect taxation of cross-border e-commerce was reviewed by Sebastian James (Senior Economist) and Daniel Alvarez Estrada (Senior Public Sector Management Specialist).

ABBREVIATIONS AND ACRONYMS

A4AI	Alliance for Affordable Internet
AAB	Authorized agent bank
ACH	Automated clearing house
ACOP	Association of Off-Dock CY/CFS Operators of the Philippines
ACU	Aggregate capacity utilization
ADB	Asian Development Bank
ADSL	Asymmetric digital subscriber lines
AEC	ASEAN Economic Community
AFM	Accounting and financial management
AI	Artificial intelligence
APEC	Asia-Pacific Economic Cooperation
ARTA	Anti-Red Tape Authority
ASEAN	Association of Southeast Asian Nations
ATM	Automated teller machine
B2B	Business-to-business
B2C	Business-to-consumer
BCDA	Bases Conversion and Development Authority
BDA	Basic deposit account
BEA	Bureau of Economic Analysis
BEPS	Base Erosion and Profit Shifting
BFAR	Bureau of Fisheries and Aquatic Resources
BIR	Bureau of Internal Revenue
BOC	Bureau of Customs
BPO	Business process outsourcing
BRTI	Indonesian Telecommunications Regulatory Authority
BSP	Bangko Sentral ng Pilipinas
BTS	Base transceiver station
BWA	Broadband Wireless Access
CAB	Civil Aeronautics Board
CAMP	COVID-19 Adjustment Measures Program
CAO	Customs administrative order
CATV	Cable TV
CDN	Content delivery network
CFS	Container freight station
CFW	Customs Facilities and Warehouses
CHED	Commission on Higher Education
CHIP	Connect, Harness, Innovate, and Protect
CICS	Check Image Clearing System
CMEC	Central Mail Exchange Center
CMO	Customs memorandum order
CMTA	Customs Modernization and Tariff Act
CMTS	Cellular mobile telephone system
COD	Cash-on-delivery
COVID-19	Coronavirus disease 2019
CPCN	Certificate of Public Convenience and Necessity
CPMI	Committee on Payments and Market Infrastructures
CSO	Clearing switch operator
CY	Container yard
DA	Department of Agriculture
DAI	Digital Adoption Index
DBM	Department of Budget and Management
DDT	Direct debit transfer
DE	Digital Economy
DENR	Department of Environment and Natural Resources
DepEd	Department of Education
DFON	Domestic fiber optic network
DICT	Department of Information and Communications Technology
DIY	Do-it-yourself
DO	Department Order
DOF	Department of Finance
DOH	Department of Health
DOJ	Department of Justice
DOST	Department of Science and Technology
DOTC	Department of Transportation and Communications

ABBREVIATIONS AND ACRONYMS

DOTr	Department of Transportation
DPWH	Department of Public Works and Highways
DTI	Department of Trade and Industry
E&E	Electronics and electrical
e-commerce	Electronic commerce
ECQ	Enhanced Community Quarantine
EDP	Electronic distribution platform
EDS	Express delivery services
EIU	Economist Intelligence Unit
EMI	Electronic money issuer
EO	Executive Order
ERC	Energy Regulatory Commission
EU	European Union
FCL	Full-container load
FDI	Foreign direct investment
FinTech	Financial Technology
FMIS	Fiscal management information systems
FOBN	Fiber optic backbone network
FRAND	Fair, reasonable, and non-discriminatory
FTTH	Fiber to the home
GDP	Gross Domestic Product
GEDI	Global Entrepreneurship & Development Institute
GEM	Global Entrepreneurship Monitor
GNI	Gross national income
GO	Gross Output
GSM	Global System for Mobile Communications
GST	General Sales Tax
GVA	Gross Value Added
HCI	Human Capital Index
HLURB	Housing and Land Use Regulatory Board
HRMIS	Human resources management information system
i3s	Inclusive Innovation Industrial Strategy
IAC	Interagency Collaboration
IAC-ICT	Interagency Committee on ICT Statistics
iBPLS	Integrated Business Permits and Licensing System
ICT	Information and Communication Technology
IF	Inclusive Framework
IFC	International Finance Corporation
IMDA	Infocomm Media Development Authority
IMF	International Monetary Fund
IoT	Internet of Things
IP	Intellectual property
IPO	Initial public offering
IPOPHL	Intellectual Property Office of the Philippines
IRR	Implementing rules and regulations
ISP	Internet service provider
IT	Information technology
IT-BPO	Information Technology and Business Process Outsourcing
ITC	Independent tower company
ITU	International Telecommunication Union
IXP	Internet exchange point
KCC	Korea Communications Commission
KYC	Know your customer
LCL	Less-than-container load
LGU	Local government unit
LLDA	Laguna Lake Development Authority
LMDS	Last-mile delivery services
LSP	Logistics service provider
LTE	Long-term Evolution
LTFRB	Land Transportation Franchising and Regulatory Board
LTO	Land Transportation Office
Mbps	Megabits per second
MC	Memorandum Circular
MCMC	Malaysian Communications and Multimedia Commission

ABBREVIATIONS AND ACRONYMS

MDEC	Malaysia Digital Economy Corporation
MFI	Microfinance institution
MIAC	Ministry of Internal Affairs and Communications
MNE	Multinational enterprise
MO	Memorandum Order
MOA	Memorandum of Agreement
MOOE	Maintenance and other operating expenses
MRT	Metro rail transit
MSB	Money service business
MSME	Micro, small, and medium enterprise
NBI	National Bureau of Investigation
NBOSS	National Business One Stop Shop
NBP	National Broadband Plan
NBQB	Non-Bank Financial Institutions with Quasi-banking functions
NBTC	National Broadcasting and Telecommunications
NCERT	National Computer Emergency Response Team
NCP	Nutrition Center of the Philippines
NCR	National Capital Region
NEA	National Electrification Administration
NGA	National government agency
NGCP	National Grid Corporation of the Philippines
NGO	Non-governmental organization
NICTEF	National ICT Ecosystem Framework
NPC	National Privacy Commission
NPS	National Payments System
NRPS	National Retail Payments System
NSW	National single window
NTC	National Telecommunications Commission
OCC	Off-Dock CY/CFS
OCF	Off-Dock Customs Facilities
OE	Offices of exchange
OECD	Organisation for Economic Cooperation and Development
OWWA	Overseas Workers Welfare Administration
P2P	Person-to-person
PA	Provisional Authority
PCC	Philippine Competition Commission
PCM	Price cost margin
PCSD	Palawan Council for Sustainable Development
PDDTS	Philippine Domestic Dollar Transfer System
PDP	Philippine Development Plan
PEMEDES	Private Express and/or Messengerial Delivery Service
PFOCN	Philippine Fiber Optic Cable Network
Philhealth	Philippine Health Insurance Corporation
PhilPaSS	Philippine Payment and Settlement System
PHILRECA	Philippine Rural Electric Cooperatives Association
PhilSys	Philippine Identification System
PHLPost	Philippine Postal Corporation
PLCN	Pacific Light Cable Network
PMR	Product market regulation
PNP	Philippine National Police
POS	Point of sale
PPE	Personal protective equipment
PPMI	Philippine Payments Management Inc.
PPP	Purchasing power parity
Project-BASS	Project Bandwidth and Signal Statistics
PSA	Public Service Act
PSMB	Payment System Management Body
PSNA	Philippine System of National Accounts
PSP	Payment service provider
PTE	Public telecommunications entity

ABBREVIATIONS AND ACRONYMS

R&D	Research and development
RA	Republic Act
RAN	Radio access networks
RIO	Reference Interconnection Offer
RPA	Robotic process automation
RRTS	Roll-on/Roll-off Transport System
RSA	Remittance sub-agent
RTC	Remittance transfer company
SBOSS	Startup Business One Stop Shop
RTGS	Real-time gross settlement
SEA	Southeast Asia
SEC	Securities and Exchange Commission
SME	Small and medium-sized enterprise
SMS	Short message service
SNA	System of National Accounts
SNDGO	Smart Nation and Digital Government Office
SOE	State-owned enterprise
SPARTA	Smarter Philippine Through R&D, Training and Adoption
SSS	Social Security System
STEM	Science, technology, engineering, and mathematics
STI	Science, technology, and innovation
SUF	Spectrum User Fees
TAB	Trading Across Borders
TELECPHIL	Telecoms Infrastructure Corporation of the Philippines
TESDA	Technical Education and Skills Development Authority
TRC	Telecommunication Regulator of Cambodia
TVET	Technical and Vocational Education and Training
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UP System	University of the Philippines System
USAID	United States Agency for International Development
USCC	United States Chamber of Commerce
VAS	Value-added service
VAT	Value-added tax
VCPE	Venture capital and private equity
VSAT	Very small aperture terminal
WBG	World Bank Group
WCO	World Customs Organization
WEF	World Economic Forum
WIPO	World Intellectual Property Organization
y-o-y	Year-on-year

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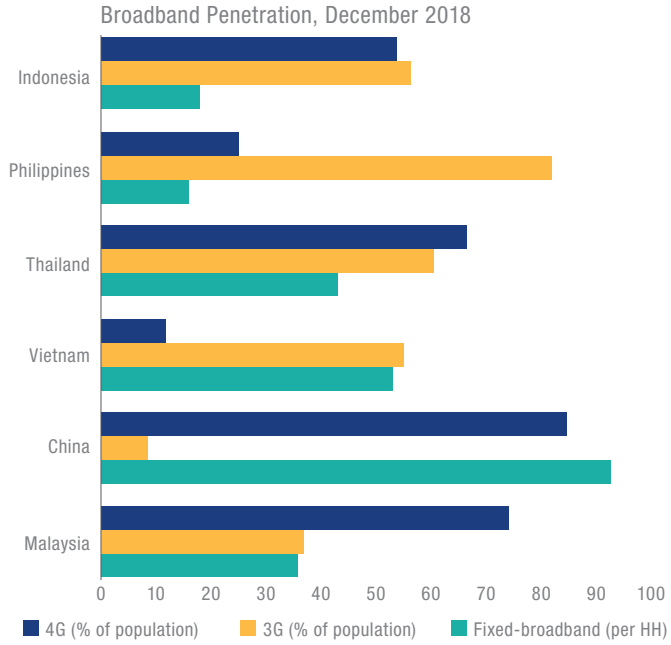
EXECUTIVE SUMMARY

The COVID-19 pandemic underscores the importance of digitalization for economic and social resilience. COVID-19 is restricting mobility and economic activity around the world, and the Philippines is no exception. As mobility restrictions and social distancing measures limit face-to-face interactions and activities, the availability of affordable digital technologies has emerged as a key determinant of resilience. Indeed, digital technologies allow businesses, the government and schools to pursue operations online rather than completely shutting down. E-commerce and digital payments have permitted business transactions to continue and goods to be delivered; online communication platforms have facilitated home-based work, virtual meetings, and remote classes; and government agencies in many countries have used online processes to quickly deliver social assistance to vulnerable households.

Unfortunately, not all countries have been able to leverage digital technologies to their full extent, because of poor access to high quality internet and long-held analog practices. In the Philippines, COVID-19 has accelerated the adoption and use of digital technologies. However, digitalization is largely constrained by the country's low high-speed broadband penetration, which lags behind neighboring middle-income countries (Figure I). The digital divide in the Philippines is large with nearly 60 percent of households not having access to internet, and unable to reap the benefits of digitalization. As a result, face-to-face interactions and analog practices largely dominate in the Philippines, making social distancing economically costly. For example, cash and cheques remain the dominant modes of payment while applying for permits and licenses typically requires exchange of documents in person. Gatherings of people waiting in lines are typical fixture for Filipinos to secure goods and services.

Figure I. The Philippines lags most regional peers in high-speed fixed and mobile broadband penetration



Source: Data from Telegeography and GSMA (2019)

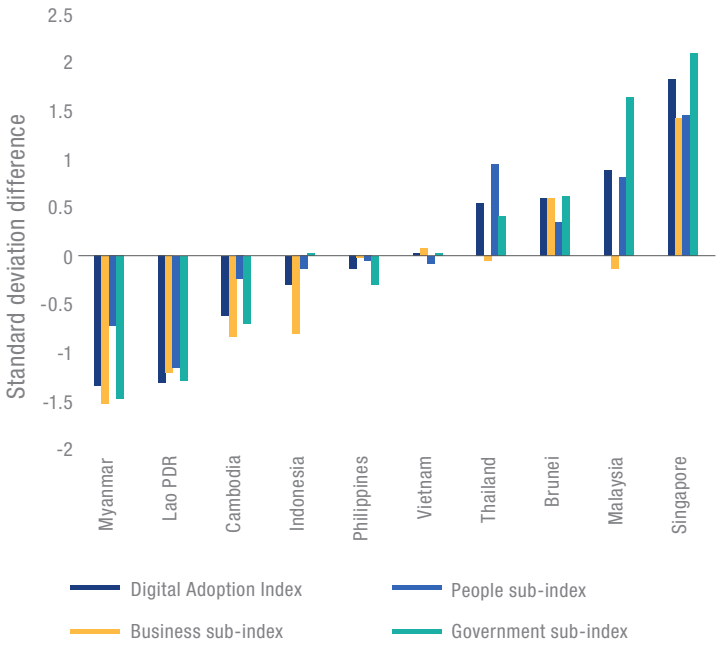
This report provides a thorough analysis of the obstacles to digitalization and identifies key reforms and policy measures that could help the Philippines harness the potential of the digital economy. It uses the CHIP (Connect, Harness, Innovate, Protect) conceptual framework to analyze the requirements to accelerate digital transformation.[1] The framework focuses on four key drivers of digitalization: (i) Connect, which refers to a set measures to build the digital foundation and enablers such as digital infrastructure for participation in the digital economy; (ii) Harness, which points to needed investments in analog complements such as skills, regulations, and institutions to leverage the old economy; (iii) Innovate, which refers to expanding the new economy services, digital payments, digital entrepreneurship and e-government; and (iv) Protect, which focuses on mitigating the risks in the digital economy. The need to act on the digital economy is urgent. Reforms delivered now will help the government cushion the impact of the COVID-19 outbreak, support the recovery in the medium term, and make the economy more inclusive, competitive, and resilient to similar shocks in the long term.

1 The CHIP framework was developed by a select team of managers and senior specialists within the World Bank East Asia and Pacific Region unit in 2019.

Accelerating digitalization: connecting the Filipinos, harnessing the opportunities offered

Despite the high internet usage, digital adoption in the Philippines generally trails behind many regional neighbors. Use of internet has expanded rapidly in the Philippines over the past decade. From 23 million in 2010, the number of Filipino internet users has more than tripled to 73 million in 2020.[2] On average, every Filipino spends nearly 10 hours a day on the internet, the most worldwide, with over five hours on mobile internet, and nearly four hours on social media. In economic terms, the share of the value added of the Digital Economy to GDP, in constant prices, grew from 7 percent in 2012 to over 10 percent in 2018. During the same period, the value added of the digital economy posted double-digit annual growth averaging over 13 percent. Still, the World Bank Digital Adoption Index (DAI) and its three sub-indices on people, government and business, reveal that the Philippines falls behind regional peers when it comes to digital adoption (Figure II). The size of e-commerce exemplifies the low levels of digital adoption. While retail trade contributes to around 20 percent of GDP, e-commerce facilitates only 0.5 percent of sales.

Figure II. Digital adoption in the Philippines lags its middle-income regional peers



Source: World Bank (2018)

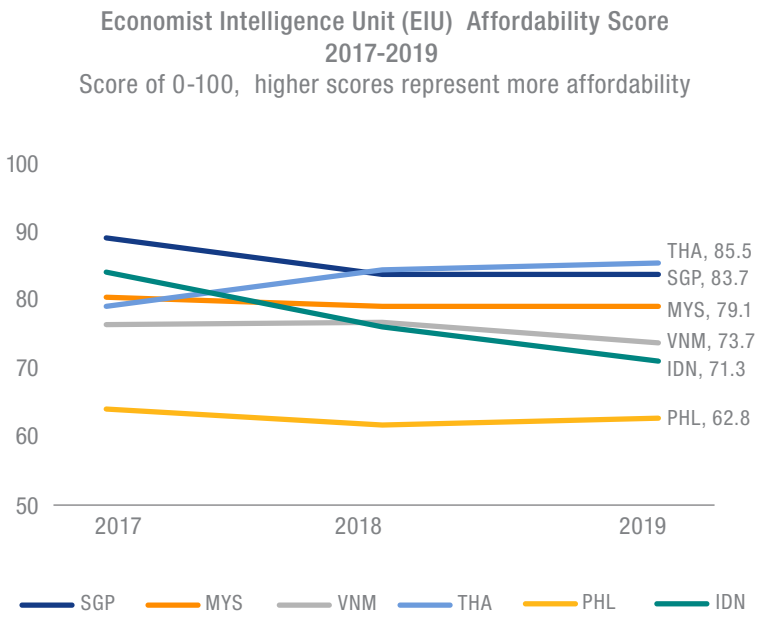
The relatively poor performance in digital adoption can be traced to a multitude of factors including the high cost and uneven quality of internet, limited adoption of digital payments, expensive logistics, and a business environment with low levels of competition. Increasing digital penetration in the Philippines requires (i) upgrading the country's digital infrastructure as internet connection is a prerequisite to participation in the digital economy; (ii) harnessing market opportunities provided functioning digital payments and online platforms; (iii) improving the efficiency and effectiveness of the country's logistics system and, finally; (iv) improving the business environment.

Upgrading the Digital Infrastructure

The Philippines' limited digital infrastructure has generated a digital divide, contributing to an unequal access to services delivered via the internet. In 2018, about 40 percent of the Philippines' total population of 103 million and about 57 percent of the country's 23 million households did not have internet access (United Nations Broadband Commission). The gaps vis-à-vis regional countries concern access, affordability and quality of internet service. Indeed, Filipino consumers experience slower download speeds and pay more than consumers in most Association of Southeast Asian Nations (ASEAN) countries (Figure III). At 16.76 Mbps, the country's mobile broadband speed is much lower than the global average of 32.01 Mbps.[3] In the region, the 3G/4G mobile average download speed stands at 13.26 Mbps compared to only 7 Mbps in the Philippines.[4] Moreover, at USD 6.30 per month for 500 MB of prepaid, handset-based mobile broadband, the Philippines has the fourth highest cost next

2 We are Social, 2020. "Digital 2020: Global Digital Overview," Accessible Online: https://wearesocial.com/digital-2020, February 8, 2020.
3 Ookla, "Speedtest Global Index – Monthly comparisons of internet speeds from around the world." Speedtest, August 2019. Accessible Online: https://www.speedtest.net/global-index, 2019.
4 Opensignal, "The State of Mobile Network Experience: Benchmarking mobile on the even of the 5G revolution." Accessible online: https://www.opensignal.com/sites/opensignal-com/files/data/reports/global/data-2019-05/the_state_of_mobile_experience_may_2019_0.pdf, 2019.
5 ITU, "World Telecommunication/ICT Indicators Database 2017," 2017.

Figure III. Connecting to the internet is expensive in the Philippines, relative to peers



Source: EIU (2019)

to Singapore, Brunei, and Malaysia.[5] Surprisingly, despite middling in terms of fixed broadband speed, the cost of a fixed broadband plan in the Philippines is close to the cost of similar plans in Singapore and Thailand, countries which have the fastest speeds in the region.

Efforts to enhance digital infrastructure are hindered by low competition and regulatory constraints in the telecommunications market. Restrictions on investment and competition in the telecommunications market have hindered efforts to improve the digital infrastructure in the country. These restrictions included the public utility designation on telecommunications which limits foreign ownership and places a cap on the rate of return. The requirement for a Congressional franchise to build a "network" also disincentivizes small, regional or community-based players from participating in the broadband networks. Other countries in ASEAN only require licenses from the regulatory bodies to build and operate a network. Two other significant regulatory constraints involve the limits on spectrum allocation which is governed by an outdated Radio Control Law of 1931, and the lack of open access policy, meant to level the playing field and ensure that market players compete based on services and innovation and not on exclusive ownership of networks. The multiple permits and licenses required to deploy networks in urban and rural areas, alongside the fees imposed by several national government agencies, local government units, and private property management such as homeowners' associations, have hindered the speedier installations of towers and stations as well. As a result, the number of towers in the country is estimated to be less than 20,000 in 2019 (DICT), far below Vietnam's 70,000 and Indonesia's 90,000 towers.

The government can reduce the digital divide by lowering regulatory constraints and barriers to market entry. The recent passage of the Common Tower Policy to speed up the rollout of mobile network infrastructure is a step toward the right direction. Foreign direct investment and know-how could increase by reducing foreign direct investment (FDI) restriction through the passage of the Public Service Act (PSA). Furthermore, executive issuances can improve spectrum management and competition for frequencies that do not need legislation.

Promote Digital Payments

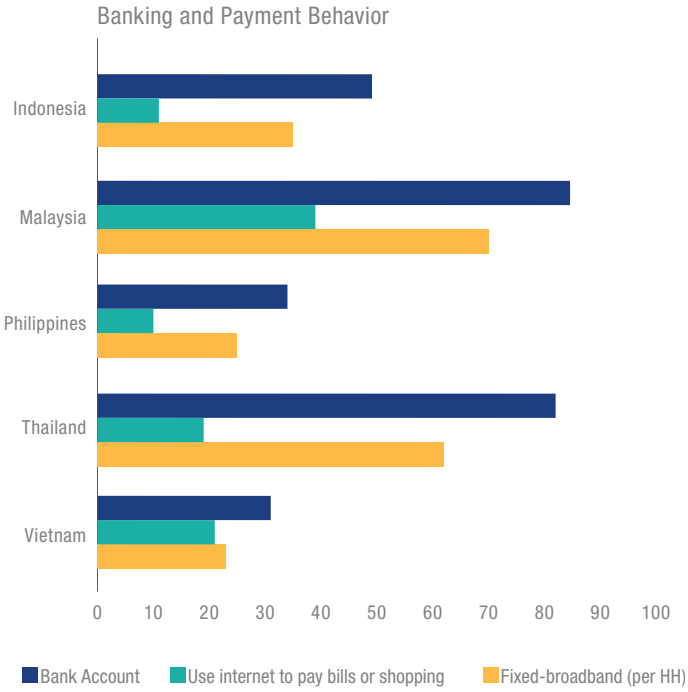
The Philippine economy is largely cash-based, with digital payments growing, but still in their infancy. Despite its handling and safekeeping costs, cash is the main medium of exchange in the Philippines, given its wide acceptance and its potential anonymity. For example, according to the Global Findex Database, almost all Filipinos prefer to use cash to pay their utility bills through bill payment services providers.[6] Only 5 percent pay utility bills through their bank accounts or mobile money accounts, compared to 22 percent in Indonesia and over 80 percent in Malaysia. Similarly, nearly 60 percent send or receive domestic remittances through over-the-counter services. Even seven out of ten Filipinos receive their wages in cash. The pervasiveness of cash is reflected even in e-commerce where orders and transactions are made digitally, but a majority of payments are still made in an analog fashion through cash on delivery.

6 World Bank, Global Findex Database, Washington DC: The World Bank, 2017.

Low transaction account ownership, lack of a national ID, nascent payment infrastructure, and the perceived risk of digital transactions restrict the wider adoption of digital payments. First, the low level of Filipino's bank account ownership is a key constraint (Figure IV). Only 34 percent of Filipino adults had accounts in 2017, lagging behind most neighboring countries like Indonesia (49 percent), Malaysia (85 percent), and Thailand (82 percent). Moreover, 40 percent of banked Filipinos were not aware of electronic payments, showing the limits of digital financial literacy. Second, the lack of a national ID system makes reliably and uniquely identifying people challenging. As a result, consumers typically need to produce multiple IDs to interact with banks. Third, while the country has made significant progress in offering interoperable retail payments with Instapay and PESOnet, many banks have yet to join Instapay, and most rural and thrift banks remain outside of this payment infrastructure. Fourth, the availability of payment services is still underdeveloped under the National Retail Payment System. Lastly, despite the availability and awareness of digital payments, including mobile wallets, people are unwilling to use them due to perceived risks of online security and safety.[7]

The Government can promote digital payments through various means. For instance, the government could lead by example by mandating its agencies to make and receive digital payments, including the delivery of emergency subsidies. Similarly, promoting the acceleration of QR code-enabler merchants can increase the acceptance of digital payments. This is especially important for the use of mobile initiated payments such as mobile money (e-money) and mobile banking. Lastly, the government can adjust the design of existing small and medium-sized enterprises' support policies and mechanisms to facilitate the adoption of digital technologies, which can increase the ability of merchants to connect with consumers.

Figure IV. Only one tenth of Filipino adults use the internet to pay bills or shopping



Source: World Bank (2017)

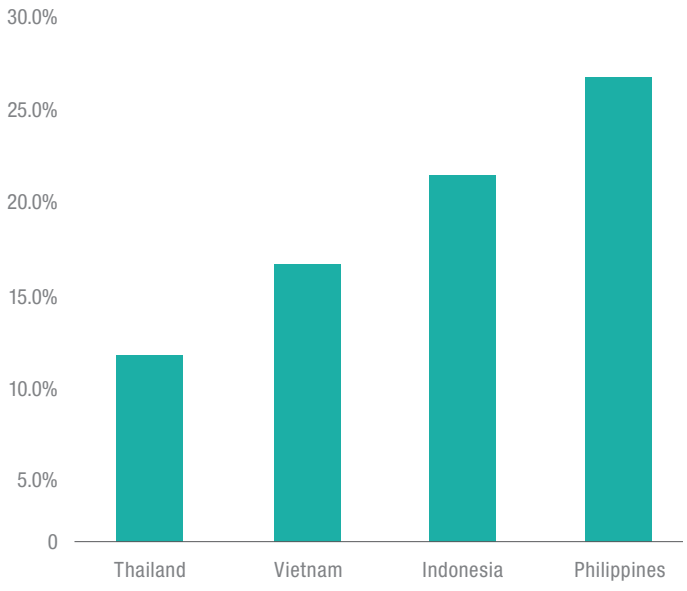
Reduce Logistics Costs

The high cost of logistics limits e-commerce growth in the Philippines. Filipino companies, from SMEs to giant corporations, complement their existing brick and mortar stores with e-commerce to broaden their consumer base and expand their market. Over the past decade, the last mile segment of the transportation and logistics industry has exploded with new options that include: technology companies like Grab, Mober, NinjaVan, and Transportify; and niche market delivery services like Foodpanda, and Lalafood. This trend accelerated during the COVID-19 ECQ. Nonetheless, companies face some of the highest costs in the region, limiting the potential growth of e-commerce. For example, according to IFC, logistics costs accounted for about 27 percent of sales of manufacturing firms in the Philippines, compared to Indonesia (21 percent), Vietnam (16 percent), and Thailand (11 percent) (Figure V). The impact is greater on SMEs, which operate on a much smaller scale and usually face high shipping and delivery costs when importing and delivering smaller shipments.

7 BSP, Financial Inclusion Survey, Manila: BSP, 2017.

Legal and regulatory constraints have hampered competition in the logistics sector. The sector remains closed to foreign investment given the lack of legal clarity as to whether different logistics services are defined as public utilities, and therefore constitutionally limited to Filipino corporations only. Meanwhile, in cross-border e-commerce transactions, shipping and fulfillment processes are getting more complicated given the disparity in regulations, including customs de minimis, valuation, clearance procedures for e-commerce, and new distribution processes. While the Philippines has taken great strides in adapting its basic legislation to support the rise of international parcels through the passage of the Customs Modernization and Tariff Act (CMTA), many of the provisions surrounding e-commerce have yet to be fully implemented. Lastly, the Philippine Postal Corporation remains fraught with issues concerning reliability and efficiency.

Figure V. Filipino firms face some of the highest logistics costs in the region



Source: IFC (2020)

The government can reduce the logistic costs by lowering regulatory constraints and barriers to market entry. As with digital infrastructure, the passing of the PSA can clarify the legal status of foreign ownership restrictions in the logistics sector and spur greater innovation in the sector. Moreover, the implementation of the CMTA provisions for e-commerce goods, adopting the WCO recommendations in its e-Commerce Package that includes the Framework of Standards, Technical Specifications, Immediate Release Guidelines, and other documents and tools supporting its implementation, can further enhance cross-border e-commerce of the Philippines. Lastly, the transition and transfer of oversight and control functions over postal service providers from the Department of Transportation and Communications (DOTC), PHLPost, National Telecommunications Commission (NTC), and now Department of Information and Communications Technology (DICT), must be reviewed and redefined to align with operational realities.

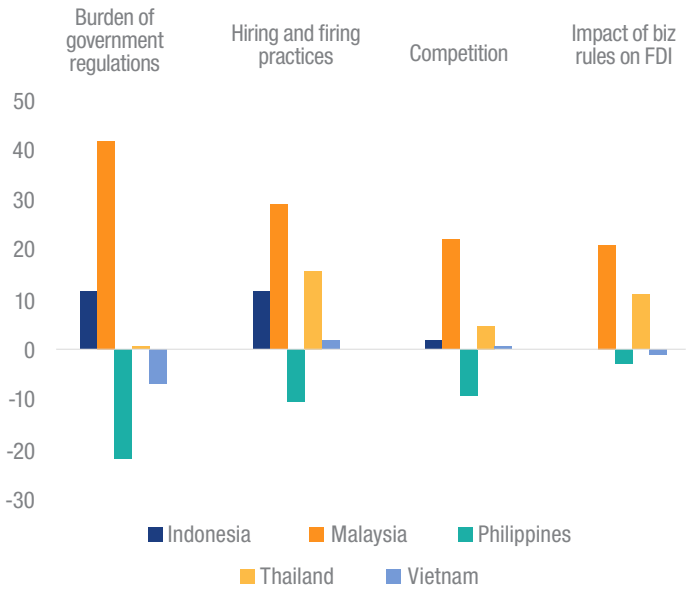
Fostering a more competitive business environment

The ability of the private sector to be part of the digital economy requires a conducive and competitive business environment. As the World Bank's 2016 World Development Report highlighted, without competitive pressure, market leaders have little incentive to invest in technologies new to the firm since they do not face competitive pressures to reduce their costs—while laggard firms are too far away from the frontier to bridge the cost gaps and enter the market.[8] Those that do enter the market may instead use old production technologies and focus on local market niches to survive.

The current business environment in the Philippines is restricted by complex regulations, including those that protect incumbents. New firms are typically responsible for most nations' net job growth. However, in 2018, only 300 new firms in the Philippines were registered per 1 million working-age people, compared to Thailand with 1,100 and Malaysia with 2,300. Entrepreneurs are largely discouraged by the administrative burdens placed on startups, together with the complexity of regulatory procedures and the regulatory protection of incumbents (Figure VI). The resulting environment leads to low competition. A recent analysis by the World Bank Group[9] confirms that a notable proportion of markets in transport, agriculture, wholesale

8 World Bank (2016). World Development Report 2016: Digital Dividends. Washington, D.C.: World Bank.
9 World Bank (2018). Fostering Competition in the Philippines: The Challenge of Restrictive Regulations. Washington, D.C.: World Bank Group.

Figure VI. The current business environment leads to low competition in the Philippines Business regulation indicators for select Southeast Asian economies



Source: WEF, 2017. World Competitiveness Report

and retail, and manufacturing can be classified as highly concentrated.

Restrictions to investments affect the Philippines' ability to attract foreign direct investment (FDI), which is key to local diffusion of technological know-how. Among the 62 countries included in the Organization for Economic Co-operation and Development's FDI Regulatory Restrictiveness Index, the Philippines is the most restrictive country in terms of FDI regulation. The country belongs to the top five most restricted countries in almost all sectors and is the top country in terms of equity restrictions. Restrictions on foreign investment are largely embedded in the 1987 Philippine Constitution and reflected in the 11th Foreign Investment Negative List. There are restrictions in several industries typically open to FDI, including utilities, logistics, retail, and education.

In addition to regulatory limits to competition, high administrative burdens on start-ups make it costly for firms to enter the market. Numerous operating permits and licenses are required from unrelated agencies that need to be renewed annually, typically paper-based, and many times requiring travel to Manila (for firms based in other regions). For example, companies operating in the logistics sector are required to secure permits from the Maritime Industry Authority for their shipping assets and from the Land Transportation Franchising and Regulatory Board for their trucks, as well as a client profile registry from the Bureau of Customs and a sea freight forwarding accreditation from the Fair Trade and Enforcement Bureau. These are in addition to permits paid to local entities, such as the Mayor's Business Permit; permits for passage from local government units (LGUs), economic zones, and ports.

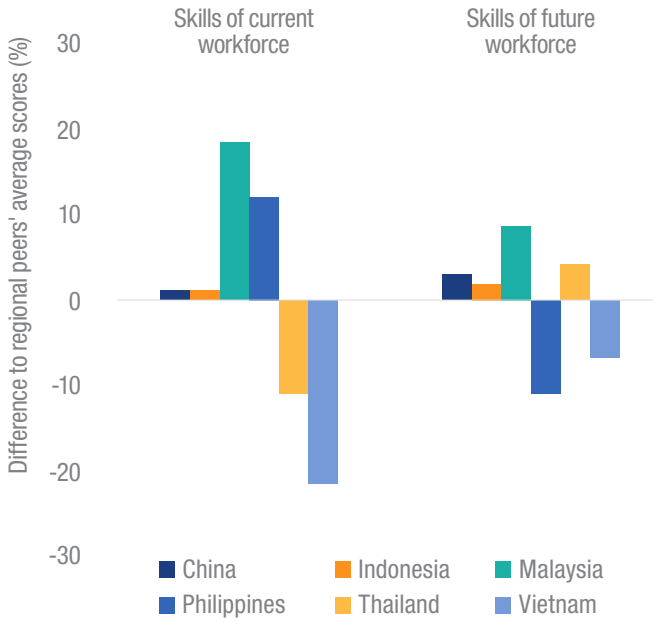
A combination of administrative and regulatory reforms can support digitalization. The transition to a more digital government can facilitate recovery and promote social distancing. Therefore, the government should require agencies to accept digital documents and digital payments as legal equivalents in the processing of all permits, licenses, and taxes. Similarly, the passing of the PSA amendment would allow for FDI and greater innovation in the sector. Lastly, the government should continue to implement the Philippine Competition Act to enable fair competition and increase the innovation needed to operate under the new normal.

To ride the waves of digital transformation, employers and workers need to know how to use digital technology, handle large volumes of information, and act with flexibility and creativity. While more productive firms tend to access the internet and use it more intensively, the successful use of digital technologies depends on firms' complementary investments in skills and organizational restructuring. This entails that workers and entrepreneurs would need to possess foundational skills in addition to technical information and communications technology (ICT) skills. To maximize the potential benefits of the digital economy, three sets of skills are required: (1) cognitive, such as problem-solving and mental speed; (2) social and behavioral, such as socioemotional skills, decision-making ability, and interpersonal skills; and (3) technical, such as the use of various software, methods, materials, and tools. Moreover, digital technologies perform

routine tasks more quickly and less costly than humans. As a result, the demand for low-skill jobs declines and the need for high-skill workers that complement these technologies increases. This, in turn, motivates people to continuously learn new skills and upgrade existing ones through a lifelong process of learning.

Filipinos' skills for today's labor force are above regional average but the skills needed for the future workforce are below average. The WEF's 2016 Competitiveness report differentiates the skills of the current workforce with those needed by the future a (Figure VII). Current workforce skills cover years of schooling, extent of staff training, quality of vocational training, skill sets of secondary education graduates, and skill sets of university graduates. In comparison, future workforce skills cover school life expectancy, quality of primary education, internet use in schools, and critical thinking in teaching. Using the skills of the current workforce, the Philippines is above regional peers' average; however, in terms of the skills for the future workforce, the Philippines lags behind its regional neighboring countries.

Figure VII. The skills of today's workforce are above average, but not full ready for a digital future



Source: Adapted from WEF 2019.

The skills of the future workforce can be improved by fostering socioemotional skills and preparing for digital education and remote learning. A first step is to embed socioemotional skills in the curricula of the extended compulsory education from kindergarten to grade 12 by explicitly stating objectives and targets and by preparing the teachers for effective delivery of content.[10] Moreover, COVID-19 has highlighted the importance of remote options to ensure the continuity of learning. Therefore, the government should prepare teachers and school leaders for multiple learning delivery modalities and learning resources, including minimum standards of digital literacy and remote learning capabilities. Lastly, encourage university and industry linkages to improve the curriculum relevance in STEM (science, technology, engineering, mathematics) disciplines.

The role of government policy in the new normal

The digital economy can take root and grow anywhere if some elements are in place, but especially if government policies shape growth in the right direction. As discussed above, the foundation of the digital economy is fast, reliable, and affordable internet. Equally important are digital enablers such as digital finance and digital IDs together with the analog complements that include the business climate, skills, and institutions. Facilitating the dividends of growth, jobs, and services requires government policy to set up a sound regulatory environment and promote digital adoption. Mitigating the risks requires the creation and strong implementation of regulations that encourage competition, guarantee accountability, and protect consumers. The resulting ecosystem allows companies to leverage technology to increase their productivity and reach new markets of digitally-able consumers.

In a society-wide digital transformation led by the government, the government itself must lead by example. The government can serve as an example by taking the lead in fast-tracking their e-governance projects. Fast-tracking the adoption of digital identification will help promote inclusivity, improve efficiency, and enhance security. Given its multi-faceted nature, planning and implementing strategies

10 Acosta, P. et al (2017). Developing Socioemotional Skills for the Philippines' Labor Market. World Bank.

for the digital economy does not fall into the hands of a single government entity. Nor will it be successful with the piecemeal efforts of separate national agencies. Instead, it requires a "whole-of-government" approach that involves the participation of various sectors that are involved in the digital economy and their corresponding e-governance projects.

This is the time to implement reforms that have been in preparation during the past decade, which can lower internet costs, broaden economic opportunities, and increase social inclusion. The need to increase digital adoption by public and private sectors is critical not only in helping the Philippines adapt to the post-COVID-19 world, but also to leapfrog toward its Ambisyon Natin 2040 dream. The government must therefore urgently take an active role in creating and implementing an enabling policy and regulatory framework through priority reforms that reduce the digital divide, reduce logistic costs, promote the use of digital payments, and create a more conducive business environment (Table I).

Table I. Policy Recommendations

Time Horizon	Policy Recommendations	Responsible Agency
	DIGITAL INFRASTRUCTURE	
Immediate term	• Coordinate and fast track procurement of internet services for government offices and critical facilities (for example, health centers, hospitals).	All government agencies
	• Amend the Public Service Act (PSA) to lower barriers to entry for foreign investments.	Congress
	• Issue common infrastructure policies to speed up the rollout of mobile network infrastructure.	DICT
	• Issue executive directives on spectrum management and competition for frequencies.	DICT
Short term	• Ensure a fair and level playing field for operators by applying the same service obligations and performance standards for the third telco to the incumbent telcos.	DICT, NEDA, PCC
	• Fast-track and lower the cost of deploying broadband infrastructure through infrastructure sharing policies that address: (a) the use of government assets (submarine cable, NGCP dark fiber); (b) the use of infrastructure across sectors such as roads, railways, electricity trans mission; and (c) coordinated build for a shared utility corridor.	DICT, DPWH
	• Reconsider direct government investment in network infrastructure and operations; and develop transition plan, including regulatory framework for open access and non-discriminatory pricing, for NBN and Free Wifi programs to be transitioned to the private sector.	DICT, PCC
	• Pass joint memorandum circulars on streamlining of permits for cellular towers and cable laying within six months, while streamlining permit requirements for network deployment and rationalize fees imposed by national and local government agencies, as well as private sector associations within the short to medium term.	DICT, ARTA, DILG, DHSUD, DOE, DPWH
Medium term	• Amend the Radio Control Law and/or the Public Telecoms Policy Act, and pass the Open Access in Data Transmission bill and the guidelines to clarify spectrum assignment, recall, and reassignment.	Congress
	• Amend EO No. 467 to liberalize access to satellites for internet connectivity to help address digital infrastructure gap in the countryside.	Office of the President
Long term	• Prepare for 5G which will be a game changer in terms of facilitating digital adoption across sectors.	DICT, NEDA
	DIGITAL PAYMENTS	
Immediate term	• Maximize the usage of payment system infrastructures and payment services including private sector payment service providers in delivering emergency subsidy payments digitally.	DOF, DTI, DSWD, BSP, DICT
	• Establish a strong consumer protection framework including grievance mechanisms, and a return and refund policy.	DTI
	• Implement e-invoice and e-receipt to make transaction digital from end to end.	DTI, BIR, DICT
	• Mandate government agencies to make and receive payments digitally to the extent possible.	NEDA, DOF, DBM, ARTA, BTr, BIR, COA

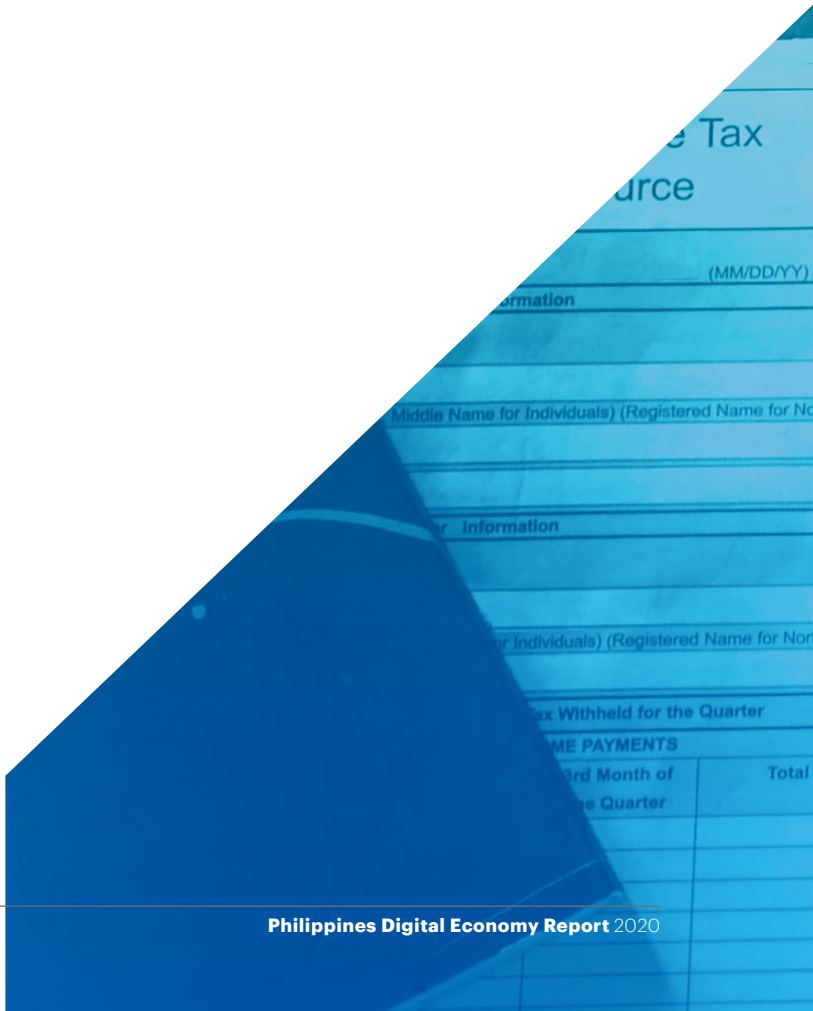
Short to medium term	•	Expand the financial literacy program in partnership with other stakeholders, covering digital financial services and digital literacy.	BSP
	•	Accelerate QR Code-enabled merchants for wider acceptance of digital payments.	BSP
	•	Implement the PhilSys in a timely manner for the delivery of public services, social safety net, and access to financial services.	PSA
	•	Expand the participating government agencies under the EGov Pay facility as well as PESONet participating payment service providers.	BSP, all government agencies
Long term	•	Promote the use of electronic payments through NRPS, and crowd in private sector entities to facilitate the expansion of ACHs with multiple payment instruments and innovation.	BSP
	•	Strengthen cybersecurity and data privacy regulations to manage the risks of adopting digital financial technology.	DICT, BSP
	•	Pass the Financial Consumer Protection bill including a consolidated ombudsman for financial services.	Congress
LOGISTICS			
Immediate term	•	Implement public-private information campaigns among SMEs, especially those outside the major cities, about logistics services to encourage them to explore the potential of e-commerce trading.	DTI
	•	Provide support for SMEs to adopt e-commerce options.	DTI, DOST, DICT
Short to medium term	•	Pass the PSA amendment to clarify the legal status of foreign ownership restrictions in the logistics sector.	Congress
	•	Implement the CMTA provisions for e-commerce goods, adopting the WCO recommendations in its E-Commerce Package that includes the Framework of Standards, Technical Specifications, Immediate Release Guidelines, and other documents and tools supporting its implementation.	BOC
	•	Fix clearance processing between PHLPost and BOC, particularly for goods destined for places outside the NCR.	PHLPost, BOC
	•	Continue efforts to modernize Customs processes through automation.	BOC
Long term	•	Revitalize PHLPost as an important anchor for the small parcel delivery logistics industry, especially for remote and isolated communities.	DOF, PHLPost
	•	Encourage logistics companies to upgrade their facilities, transportation assets, and ICT infrastructure and systems, through assistance and access to long-term financing with low interest rates.	DTI
	•	Review and align with operational realities the transition and transfer of oversight and control functions over postal service providers from the DOTC, PHLPost, NTC, and now DICT.	DICT
DIGITAL TAXATION			
Short to Long term	•	Obtain more precise data to allow for assessment of the tax revenue lost as a result of the current low value consignment exemption from VAT and the potential yield from its reduction, or abolition.	DOF, BIR
	•	Identify what data is available about the consumption of digital services by consumers in the Philippines, and enter into dialogue with the industry to assess the scale of the market and future trends. That could be part of an overall consultation about changes to the VAT treatment of imports.	BIR
	•	Develop an appropriate legislative model that can be translated into provision in the Philippine Tax Code, and compliance strategy to support the policy changes and BIR and BOC that can be best integrated into their current operations.	DOF, BIR
COMPETITIVE BUSINESS ENVIRONMENT			
Immediate term	•	Require government agencies to accept scanned documents, digital photographs, and digital payments as legal equivalents in the processing of permits, licenses, and taxes.	BIR, COA, BTr, BSP
Short to medium term	•	Pass the PSA amendment.	Congress
	•	Pass Executive Order on the National Competition Policy.	Office of the President
	•	Prepare teachers and school leaders for multiple learning delivery modalities and learning resources.	DepEd
Long term	•	Embed socioemotional skills in the curricula of the extended compulsory education from kindergarten to grade 12 by explicitly stating objectives and targets and by preparing the teachers for effective delivery of content.	DepEd

What are the payoffs of these reforms?

Digital reforms can help the economy become more competitive. Digital technologies can increase the productivity of businesses, and the efficiency of the government. They can enhance coordination and automate processes in a way to increase operational efficiency and reduce costs. These technologies can replace existing factors of production like labor or non-ICT capital the way travel agency is replaced by online airline booking system; or augment the factors to make them more productive like workers using technology. They can also deliver economies of scale and platform contributing to greater organization and collaboration among economic agents. The Philippines can learn from other countries. In Turkey, firms using the internet for online orders or reservations are 11 percent more productive, 25 percent larger, and twice more likely to export. Governments using one-stop computerized service centers and online portal have improved service efficiency. For example, Malaysia's introduction of an online registration system for Goods and Service Tax reduced the time to start a business by 10 days in 2019.

Digital reforms can also help the Philippines become more resilient. The transition to a digital economy will make the country more resilient to external and natural shocks like the COVID-19 pandemic. Digital technologies will help the country address the pandemic and the new normal by facilitating social distancing while maintaining engagement and communication. It can support work-from-home arrangements, distance learning, and offsite service delivery, avoiding business disruptions and ensuring service continuity. Digital payment solutions facilitate contactless transactions on online payments and fund transfers that would be more effective than the traditional banking experience. Reform efforts can ensure the government reliable systems for efficient and transparent public service delivery, which can be used to deliver cash aid and other services to disaster-prone country like the Philippines.

Digital reforms can finally help the Philippines be more inclusive. Digital technologies can make development more inclusive through information sharing, facilitating search-and-matching, and providing service deliveries to those previously unreached and unserved. Online jobs markets are able to connect employers with job applicants, while e-commerce platforms connect Filipino sellers from urban or rural areas to buyers in local and foreign markets. These technologies can also stimulate new business models and provide new avenues for activities away from their traditional domains. Massive open online courses offer learning opportunities for Filipino students at the click of a button, while local microfinance companies offer lending services through mobile applications. Leveraging these digital technologies can help deliver inclusive development by widening economic opportunities for everyone.



CHAPTER 1

OVERVIEW OF THE DIGITAL ECONOMY IN THE PHILIPPINES

The Philippines aims to be a prosperous middle class society free of poverty by 2040. This collective long-term vision of the Filipinos for the Philippines is enshrined in the Ambisyon Natin 2040. The vision depicts the life of all Filipinos in the next 20 years to be matatag (strongly rooted), maginhawa (comfortable), and panatag (secure) – essentially, a middle class lifestyle characterized with home and vehicle ownership, steady income source to support family and self, ample finances for children's education, leisure, and retirement. As a long-term national vision, Ambisyon Natin 2040 serves as a guide and anchor for development planning in the country starting with the Philippine Development Plan (PDP) 2017-2022 and in succeeding PDPs across different administrations until 2040.

The country also aspires to be a globally competitive knowledge economy. To build the foundation for a knowledge economy, the government is making it a priority to promote and accelerate technology adoption, and stimulate innovation in all economic sectors. The current PDP outlines the strategic priorities on science, technology and innovation (STI) that encompass both the public and private sectors. These priorities include strengthening open collaboration among actors in the STI ecosystem, enhancing the creative capacity for knowledge and technology generation, investing in STI-based start-ups, enterprises, and spin offs, and increasing STI utilization in agriculture, industry, and services sectors. The PDP recognizes the need to leverage the potential – and manage the risks – of digitalization to enable service delivery and expand opportunity for all Filipinos.[11]

The emergence of the COVID-19 pandemic threatens the growth momentum of the economy. The COVID-19 pandemic has reached Philippine shores, risking lives and disrupting livelihoods. To flatten the infection curve, the authorities responded with tough containment measures through social distancing guidelines and an enhanced community quarantine (ECQ) in Luzon and other regions, restricting the movement of people and reducing business operations to only the essentials. The containment measures have paralyzed the economy, resulting in the losses of incomes, jobs, and investments, and disruptions in domestic value chains. These adverse socio-economic outcomes necessitated the delivery of unprecedented social assistance and fiscal measures to help households survive the lockdown, businesses avoid bankruptcies, and the healthcare system respond to the outbreak. Nevertheless, if the pandemic prolongs further, large scale fiscal and monetary policy support may not prevent vulnerable firms from exiting, and households from curtailing consumption.

The call to leverage the digital economy has become compelling as the country grapples with the nature of the "new normal". Until a vaccine is discovered, an immediate return to normalcy is unlikely. Between now and then, the Philippines has to resume activities under a cloud of social distancing measures, and health and hygiene protocols. Evidences are mounting that digitalization has accelerated through digital banking, e-commerce, and online bills payment amidst the lockdown.[12] The longer the pandemic endures, the more entrenched the changes underway become. Businesses and individuals will have learned the benefits of digital technologies to alter their way of enterprises and lives. Workers will have discovered that home-based work can be as productive as reporting to duty station despite its own set of challenges. Firms will have learned to develop supply chains with built-in resilience, and to operate as normally as possible with reduced in-person meetings and limited travels. With the infrastructure and processes in place, and behavioral changes taking permanent hold among firms and individuals, the digitalization momentum will likely stay even after a vaccine rolls out.

11 Similarly, the Philippine Inclusive Innovation Industrial Strategy (i3s) aims to grow and develop globally competitive and innovative manufacturing, agriculture, and services industries by focusing on three major areas: (1) the creation of an innovation and entrepreneurship ecosystem; (2) the removal of obstacles to growth to build industry clusters; and (3) the strengthening of domestic supply and value chains. It relies on strong government-academe-industry collaboration with the government acting as the main coordinator and facilitator in addressing the most binding constraints to the growth of industries.

12 Data from the BSP revealed that the two electronic fund transfer services – Instapay and PESONet – saw a combined 158.6 percent year-on-year increase in transaction value in the second quarter of 2020.

While the Philippines has grown remarkably in the past decades, only a transformative solution will catapult the economy into reaching its long term targets. The Philippines has enjoyed 21 years of uninterrupted growth since the Asian Financial Crisis of 1998. Economic growth has accelerated from an annual average of 2.8 percent in 1990-1999 to 4.5 percent in 2000-2009 and further to 6.4 percent in 2010-2019. However, in recent years, growth has steadily declined from the levels of 7.0 percent seen in the early-2010s with indications that potential growth is already declining. Moreover, the COVID-19 pandemic may lead to a growth contraction in 2020, and if not managed well, lead to negative long term effects. Thus, a business-as-usual approach cannot deliver the sustained growth necessary to reach the Ambisyon Natin 2040 targets; rather, a transformative solution is needed to increase the economy's productivity and competitiveness. That transformative growth solution lies in harnessing the potential of the digital economy.

Why the Digital Economy?

There is no standard definition of the 'digital economy'. Much of the confusion surrounding the digital economy, especially on its coverage, attributes, and measurement, lies in the absence of a widely agreed definition. The lack of a standard definition is attributed to the new and rapidly evolving nature of the technology, and our own insufficient understanding of the subject matter. As a result, multiple definitions of the same term have arisen not only across the literature but also over time. On the one hand, digital economy has been defined narrowly as online platforms and those business transactions and activities arising from those platforms. On the other hand, it has been defined broadly as anything that use digitized data.[13] Many commentators have taken electronic commerce (e-commerce) as a proxy for the digital economy, while others have pushed further to refer to it as encompassing both e-commerce and the Information and Communication Technology (ICT) sector.

Despite the differing definitions, international organizations are unanimous in affirming the digital economy's importance as a contributor to growth and innovation. Even international organizations have defined the digital economy quite differently. In its study of value creation of the digital economy, the United Nations adopted the definition by Bukht and Heeks (2017), who distinguished the digital economy as the part of economic output derived from digital technologies with a business model based on digital goods and services (UNCTAD, 2019). The G-20 and World Economic Forum (WEF) defined it as the broad range of economic activities that use digitized information and knowledge as key factors of productions, modern information networks as an important activity space, as well as ICT to drive productivity growth. Rather than covering a broad scope, the IMF (2018) focused on the digital sector comprising the producers at the core of digitalization: online platforms, platform-enabled services, and suppliers of ICT goods and services. Despite the differences in definitions, international organizations are unanimous in affirming the importance of the digital economy to economies, citing it as a catalyst for innovation, growth, and social prosperity.[14]

In the context of the Philippines Digital Economy Report, the digital economy refers to private sector utilization of digital technologies as a driver of economic growth, innovation, and other means of transforming the economy. This definition is aligned with the World Bank 2019 report on the Digital Economy in Southeast Asia: Strengthening the Foundations for Future Growth. It is based on an emphasis on the digital economy's contribution to economic growth; and encompasses the adoption of digital technology in all sectors of the economy, not just the ICT. As a consequence, the authorities must look beyond the ICT sector, and the policies and regulations relating to it, when developing strategies to grow the digital economy and maximize its positive impact (World Bank, 2019a).

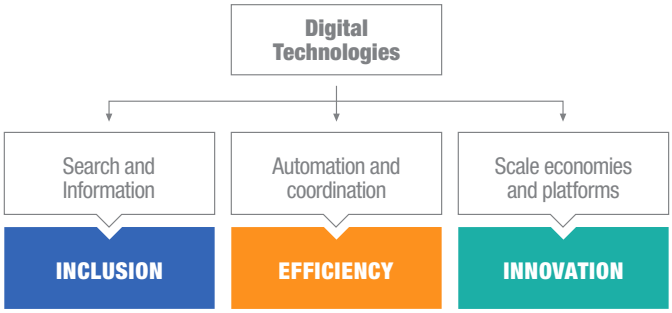
13 The definitions on digitization, digitalization, and digital transformation are much clearer. Digitization is the process of encoding analogue information or procedure into binary bits that can be read and manipulated by computers. Digitalization is the process of using digital technologies to change a business model, and provide new revenue and value-producing opportunities. Digital transformation is the process of integrating digital technology into all areas of the business, changing the operations and value delivery to customers. See Ahmad and Ribarsky, 2018; Bloomberg, 2018.

14 The 2016 OECD Ministerial Declaration on the Digital Economy alluded to the growing use of and investment in digital technologies and knowledge-based capital, and the powerful catalyst of the digital economy for innovation, growth and social prosperity. In the following year, Asia-Pacific Economic Conference (APEC) leaders affirmed the importance of promoting the internet economy and adopted the APEC Internet and Digital Economy Roadmap. The G20 Osaka Leaders' Declaration in 2019 affirms the need to harness the power of technological innovation, in particular, digitalization, and its application for the benefit of all.

Digital technologies can make development more inclusive, efficient, and innovative. They facilitate search-and-matching and information sharing; automate processes and enhance coordination; and contribute to greater organization and collaboration among economic agents (Figure 1.1). In practice, technology-enabled platforms have been used to reduce transaction and information costs, allowing the participation and inclusion of those previously un-reached and un-served (for example, Philippines job posting sites for job seekers). They have been used to boost efficiency through the enhancement of existing production factors, or the replacement of costlier and inefficient ones (for example, internet money transfer services that allow overseas Filipinos to remit money home at lower fees and shorter wait times). Furthermore, they have led to innovation as they stimulate new business models and provide avenues for activities away from their traditional domains (for example, ride-hailing applications that provide income-earning opportunities for Filipinos and convenience for public commuters). Leveraging digital technologies delivers inclusive development by widening economic opportunities for everyone. In designing digital strategies, authorities must invest in the analog complements (Figure 1.2) to avoid turning the rewards of the digital economy into risks (Box 1.1).

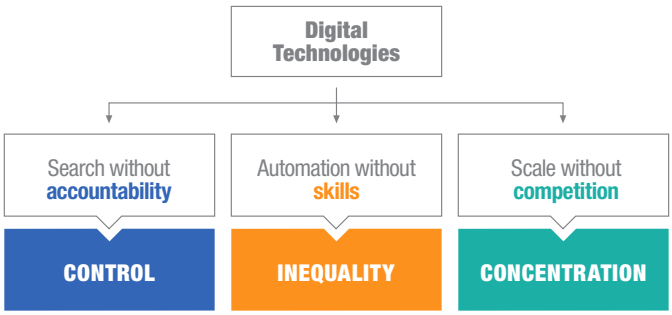
There is evidence to show that digital technology adoption increases productivity and economic growth. A World Bank analysis of 120 countries reveals that a 10-percentage point increase in broadband penetration results in a 1.3 percentage point increase in economic growth (World Bank, 2009). This growth effect of broadband is significant and stronger in developing countries than in developed economies, and it is higher than that of telephony and internet. Among European Union (EU) countries, Gal et al. (2019) show that digital adoption is associated with productivity gains, having particularly strong effects in industries such as manufacturing and those with routine-intensive activities. From 2013-2017, the most digital intensive-using industries drove labor productivity growth in the EU; while they contributed to as much as 86 percent of labor productivity growth in the United States

Figure 1.1. Digital technologies promote development through three mechanisms…



Source: World Bank (2016a).

Figure 1.2. …but without investing in the analog complement, these mechanisms can bring risks.



Source: World Bank (2016a).

(Van Ark et al., 2019).

Digital technologies contribute to growth by expanding trade, raising efficiencies, and leading to greater competition. The use of internet, in particular, has led to greater trade to more markets, often by newer and younger firms. A 10-percent increase in internet use in the exporting country is found to increase the number of products traded between two countries by 0.4 percent; while a similar increase in internet use of a country pair increases the average bilateral trade value per product by 0.6 percent (World Bank, 2016a). In Turkey, firms using the internet for online orders or reservations are 11 percent more productive, 25 percent larger, and twice more likely to export. These technologies raise efficiency and labor productivity in all economic sectors. Access to information helps firms make better use of existing capacity, optimizes inventory and supply chain management, cuts downtime of capital equipment, and reduces risk. Internet-based services also facilitate market entry and encourage competition, with internet firms generally able to start and scale up quickly with relatively little staffing or capital investment.

Box 1.1. The Analog Complements of the Digital Economy

Without a strong analog foundation, the benefits reaped from adopting digital technologies may turn into risks. While digital technologies deliver economies of scale for firms, markets may become excessively concentrated in the absence of a business environment that fosters competition. As digital technologies automate many tasks and increase labor productivity, inequality may rise when workers do not possess the skills that technology augments. While the internet surmounts information barriers that impede the government's ability to provide its services, states and corporations may use the same technology to exercise control when a country lacks institutions that ensure the government's accountability. To mitigate such risks, the digital economy requires the support of "analog complements" consisting of regulations, skills, and institutions.

Firms can leverage the internet to compete and innovate if regulations that promote competition and easy entry of firms are effectively enforced. Gradually reducing market distortions that disincentivize firms to use these technologies can increase competitiveness and encourage greater use of these technologies. Examples of such market distortions are state control in economic sectors, barriers to entrepreneurship, and restriction on trade and investment. Improving firm registration and making markets more transparent reduces price collusions, market sharing, and rigged public procurements, allowing firms to enter the market more easily. Where firms may have limited understanding on leveraging the internet, benchmarking and information programs can be effective. Carefully tailoring regulations for firms in 'new economy' markets (for example, Uber and Airbnb) to guarantee competition is crucial given that these markets are characterized by new business models and structures that differ from those observed in traditional markets. Ultimately, policymakers have to design enabling regulations and avoid the associated risk of being too restrictive.

Workers, entrepreneurs, and public servants can maximize the opportunities in the digital world if skills that automation complements rather than replaces are developed. Learning these skills should begin early to lay down the cognitive and socioemotional foundations for more advanced technical skills. Exposing children to coding and basic ICT concepts can also influence career choice and instill a basic understanding of digital technologies. The onset of digital transformation also requires a change in the way that education systems teach students. Instead of training students for a particular job by teaching them rigid skills, educational systems should prepare them for a career in the context of an ever-changing environment driven by technological changes. This preparation requires honing skills such as creativity, teamwork, problem solving, and critical thinking, and emphasizing project work and fewer assessments in place of frequent testing. Lastly, workers must constantly reevaluate and upgrade their skills to take full advantage of advancements in digital technology. To facilitate this, governments can provide incentives for firms and workers to create mechanisms for lifelong learning.

The government can effectively use digital technology to empower its constituents and deliver services if institutions that guarantee accountability are established and strengthened. Improving the monitoring of government workers and government-funded organizations that deliver services using digital technologies help curtail absenteeism, operational inefficiencies, and corruption. Making information services accessible to citizens also supports transparency in service delivery. Digital technologies can also improve electoral accountability, help uncover election fraud, and reduce election-related violence. Automation in business regulations, citizen feedback systems, and procurement systems also reduce the risk of corruption and poor services. Providing incentives such as faster tax refunds for e-filing or greater convenience through simplified and closely integrated services across agencies lead to universal use of e-government services. The wider usage of these services, in turn, create a platform for broad-based participatory policy making.

In the new normal, digital technologies can facilitate social distancing by reducing face-to-face interactions. Digital platforms have been used for people to stay connected and engaged, and for some businesses to operate amid the lockdown. With social distancing measures in place, the use of these technologies supports work-from-home arrangements, remote learning, and offsite service delivery. Efforts to digitize government processes could be expanded and made permanent, making the government more transparent and efficient.

E-commerce facilitates social distancing through online shopping and bringing products to people's home. Several firms have responded to the need of providing consumers their necessities without requiring them to step outside of their homes. Lazada and Grab have launched grocery delivery services, while platforms such as MyKuya and MrSpeedy have provided services where riders buy grocery items, and have them delivered to customers. Food delivery and courier service providers have launched 'contactless deliveries' to ensure the safety of both customers and riders. Effective and affordable logistics is therefore pivotal to make sure that e-commerce fulfills the opportunities for micro, small, and medium enterprises (MSMEs) and entrepreneurs.

Digital payment solutions should continue to replace cash and checks, and facilitate contactless transactions. During the ECQ, several banks have waived InstaPay and PESONet fees, permitting account holders to transfer money to another account holder of other banks using mobile phones or internet browsers for free. This has allowed transfers that are otherwise difficult or nearly impossible during the ECQ. For instance, firms can transfer the salaries of their employees directly into their bank accounts. Customers can conveniently pay for essentials they bought online through internet banking, mobile banking, or digital wallets. Moreover, the government can easily disburse financial aid to the beneficiary's bank account, which removes the need for beneficiaries to line up or for government workers to distribute door-to-door, as in the case of DOLE-AKAP program for displaced overseas Filipino workers (OFWs).

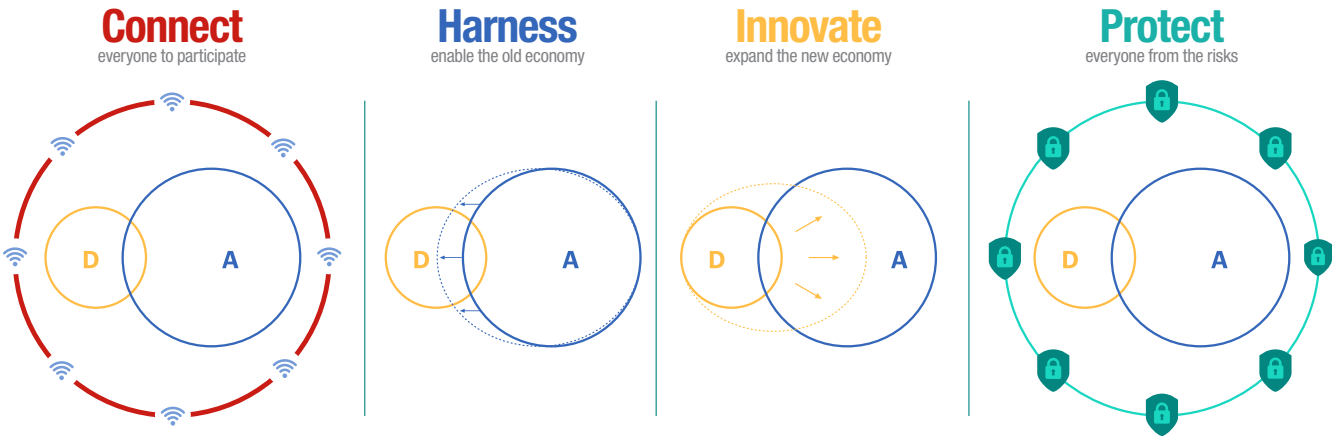
Digital applications are ideal conduits in delivering information and healthcare services including the testing and tracing of individuals. Telemedicine services have started to be adopted by doctors across the country who consult patients remotely through online schedule sign-ups and video-conferencing tools. Contact tracing mobile apps are used as digital alternatives for the more expensive physical tracing. The Department of Health (DOH) has launched its COVID-19 Tracker, sharing up-to-date information on the epidemiology of the disease. The tracker includes data on laboratory testing capacities, the total number of tests, and the number of unique individuals tested, and makes use of data science tools to visually present the data and make it easily understandable to the general public.

A Framework to analyze Digital Transformation

The CHIP conceptual framework is a tool to analyze the factors contributing to the acceleration of digital transformation. The framework[15] lays out four main elements of digital transformation: Connect, Harness, Innovate and Protect (Figure 1.3). Connect refers to building the digital foundation and enablers to ensure compatibility and interoperability with the goal of ensuring participation in the digital economy. Harness refers to investing in analog complements such as skills and literacy, regulations, leadership and institutions in a way to leverage the old economy. Innovate refers to creating and expanding the new economy services, business models, digital entrepreneurship and e-government. Finally, protect refers to mitigating the risks and protecting everyone from risks on cybersecurity and privacy, digital monopoly, and inequality of opportunities.

15 The CHIP framework was developed by a select team of managers and senior specialists within the World Bank East Asia and Pacific Region unit in 2019.

Figure 1.3 The CHIP framework shows the four ways to support digital transformation, …

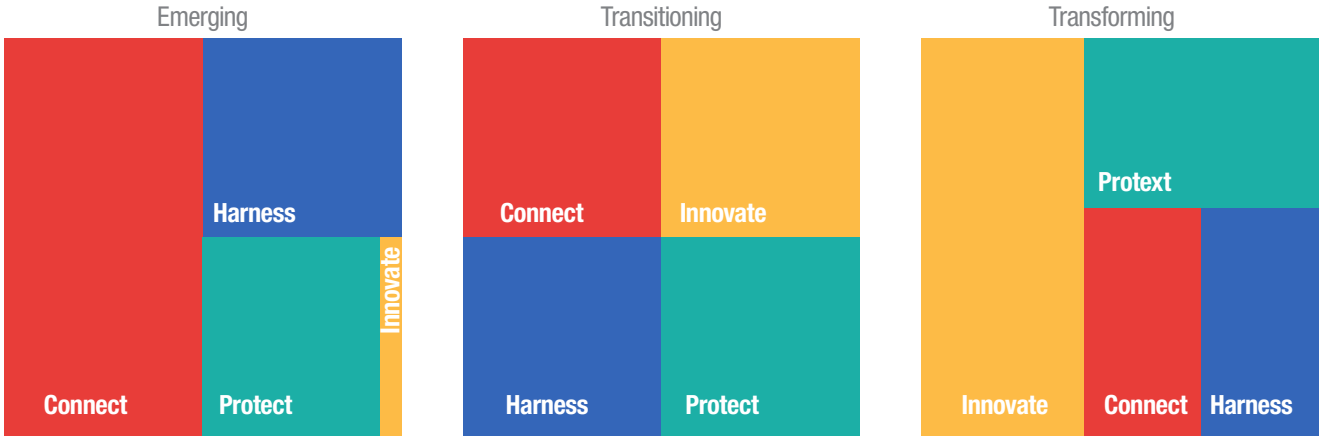


Source: World Bank staff
Note: A refers to the physical/analog economy; and D the digital economy.

The framework can be used to identify priorities by country context. Countries are classified in three categories depending on the priorities to accelerate digital transformation: emerging, transitioning, and transforming (Figure 1.4). Emerging economies are characterized as countries starting to leverage digital transformation, and hence, initially focus on connecting people, businesses and government digitally. These economies prioritize the building of digital infrastructures and setting in place much of the foundations for digital transactions such as digital payments and digital IDs. Meanwhile, transitioning economies are characterized as countries that give equal weights to all elements. They have sufficiently connected digitally, and have resources to focus on harnessing the analog economy and expanding the new economy while taking measures to protect from risks. Finally, transforming economies are characterized as countries that have strongly set foothold on the digital economies, taking innovative measures to leverage technologies, and strengthening security from risks.

The Philippines is a transitioning economy, focusing efforts on all elements of digital transformation.
In the Philippines, the public and private sectors are simultaneously taking measures to connect people, harness the old economy, support the new economy, and set up security measures to protect from risks. The country has brought in a third player in the telecommunication industry in an effort to lower the prices of mobile technology and internet services, and expand digital connectivity. Regulatory issues are being addressed on infrastructure-sharing, and demand side aspects on interoperability to

Figure 1.4. … and identify country priorities to support digital transformation.



Source: World Bank staff

support digital government platform. Likewise, the roll out of the Philippine Digital ID System (PhilSys) meant to introduce a universal ID system for Filipinos and foreign permanent residents in the Philippines is underway. Numerous agencies are working together to harness the analog and digital economy through e-commerce roadmaps, national broadband plans; and measures to promote the creative economy on the back of an emerging advertising, film, animation, game development and design industries. Measures have also been undertaken to protect individuals from risks which began early with the Data Privacy Act of 2012, and continues with the National Cybersecurity Plan 2022 (Figure 1.5).

Figure 1.5. The Philippines focuses on all four elements of digital transformation.

Source: World Bank staff

State of the Digital Economy in the Philippines

The Philippines is potentially a significant player in the global digital market. From 23 million in 2010, the number of Filipino internet users has more than tripled to 73 million in 2020 (We Are Social, 2020). Connected Filipinos are world leaders in internet usage and social media. On average, every Filipino spends nearly 10 hours on the internet per day, the highest worldwide; with over five hours on mobile internet, and nearly four hours on social media. The size of the country's domestic market, with over 105 million consumers, has attracted international and regional ICT companies including Facebook, Google, Alibaba, Grab, and Lazada, whose platforms for e-commerce, online sharing, and social media have gained strong foothold in the country. Similarly, the Philippines has penetrated foreign markets, being a leader in the Information Technology and Business Process Outsourcing (IT-BPO) industry.

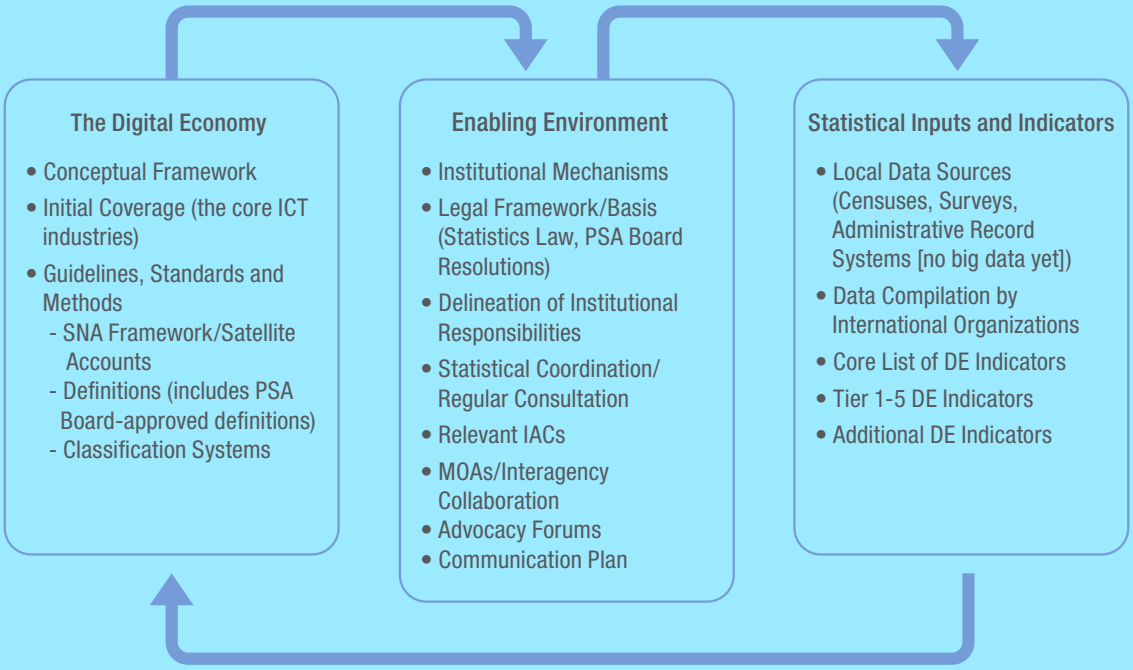
The Philippines registered strong growth in gross value added of the digital economy in the past decade. The share of the value-added of the digital economy to real GDP steadily grew from 6.9 percent in 2012 to 10.1 percent in 2018. During the same period, the value added of the digital economy posted double-digit growth averaging 13.3 percent. E-commerce expanded the fastest with an average growth of 22.5 percent between 2012 and 2018, followed by infrastructure at 11.5 percent, and digital media at 9.1 percent. Moreover, real gross output of the digital economy nearly doubled in 2018 compared to 2012, while the average compensation in the digital economy was about 50-60 percent higher than for the total economy (Box 1.2).

Box 1.2. Measuring the Size of the Digital Economy in the Philippines

The World Bank, in collaboration with the Philippine Statistics Authority, coordinated efforts in measuring the size of the digital economy in the country. Until then, the Philippine System of National Accounts (PSNA) has not fully captured activities under the digital economy as well as digital products and services resulting from digital computing technologies. As a result, no official estimates for the digital economy in the Philippines has been available, which resulted in various estimates of the size and scope of the sector from multiple sources.[16] The World Bank-Philippine Statistics Authority joint study aims to develop the statistical and measurement framework for the digital economy in the Philippines along the lines of a satellite account of the PSNA, bearing in mind the desirability of using methodologies that strive for the international comparability of the resulting digital economy indicators.

The project builds on earlier initiatives by institutions and the experience and insights that have been gained through these initiatives. Building on the works of the OECD, and the United States Bureau of Economic Analysis (BEA), the conceptual framework recognizes the multidimensional nature of the digital economy, and contextualizes it in relation to the total economy through an elaboration of a satellite account within the System of National Accounts (SNA). It looks at the digital economy from the conventional SNA prisms of products, production, and use (that is, who, what, and the institutional sectors), in addition to the nature of the transactions (that is, how). It also recognizes the role of the enablers for the functioning of the digital economy. However, data constraints in the Philippine Statistical System data ecosystem limits the operationalization of this conceptual framework. As a result, the coverage of the statistical framework is less broad, by a) not going beyond the SNA production boundary; b) limiting to transactions that are digitally ordered and/or digitally delivered; and c) excluding the enablers dimension since there is ongoing debate on its measurement. The statistical framework is seen in Figure 1.6.

Figure 1.6. Statistical Framework for the Measurement of the Digital Economy in the Philippines



Source: Virola (2020).

16 The various estimates arose due to differences in the conceptual framework, coverage, and data measurement. See, for instance, the UNCTAD Digital Economy Report (2019); Hinrich Foundation (2019); Google-Temasek-Bain & Company (2019).

The estimation methodology follows the methodology by the US BEA in the compilation of key measures of the digital economy in the United States.
The estimation process includes four main steps: (a) develop a conceptual definition of the digital economy; (b) identify goods and services within the supply-use framework relevant for measuring the digital economy defined in the first step; (c) use the supply-use framework to identify the industries responsible for producing these goods and services, and estimate the output, value added, employment, compensation and other variables associated with this activity; and (d) compile the results.

The contribution of the digital economy in the Philippines is measured through the production approach or value-added approach.
This method consists of summing the gross value added (GVA) of all industries that are classified as part of the digital economy. For each industry classified to be part of the digital economy, the gross output (GO), and the goods and services that were used up in the process of generating output are estimated. These goods and services are referred to as intermediate consumption. The difference between an industry's gross output and its intermediate consumption is its GVA. The sum of the GVAs of all the industries belonging to the digital economy is the GVA of the digital economy. In defining the statistical coverage of the digital economy, the estimates use the core ICT industries as defined by the Philippine Statistics Authority Inter-agency Committee on ICT statistics (IAC-ICT) including the digital-enabling infrastructure and digital content/media; and incorporate the digital transactions for e-commerce.

Key results show solid growth of the digital economy in the Philippines between 2012 and 2018.

• In current prices, the value added of the digital economy expanded by 10.1 percent in 2012 and has grown by double digit since then peaking at 15.1 percent in 2017 before slowing to 12.4 percent in 2018. Annual growth averaged 12.2 percent between 2012 and 2018. By component, e-commerce grew the fastest at 25.4 percent between 2012 and 2018, followed by digital media at 11.9 percent; and infrastructure at 9.8 percent.

• The value added of the digital economy in current prices is distributed by component as follows: infrastructure (average of 79.8 percent during the period from 2012-2018), e-commerce (17.3 percent) and digital media (2.9 percent). The share of infrastructure has been consistently going down from 84.6 percent in 2012 to 74.5 percent in 2018, while that of e-commerce has gone up from 12.5 percent to 22.9 percent during the same period.

• In constant prices, the value added of the digital economy posted double-digit growth averaging 13.3 percent during the period. Growth rose from 11.2 percent in 2012 to 11.9 percent in 2018. E-commerce expanded the fastest with an average of 22.5 percent from 2012 to 2018, followed by infrastructure at 11.5 percent and digital media at 9.1 percent

• Similarly, the share of value added of infrastructure in the digital economy went down from 81.6 percent in 2012 to 74.5 percent in 2018. The share of e-commerce gradually went up from 15.0 percent in 2012 to 22.9 percent in 2018, while the share of digital media from 3.5 percent in 2012 to 2.7 percent in 2018.

• In real terms, the value added of the digital economy as a percentage of GDP grew steadily from 6.9 percent in 2012 to 10.1 percent in 2018.

Digital Adoption in the Philippines

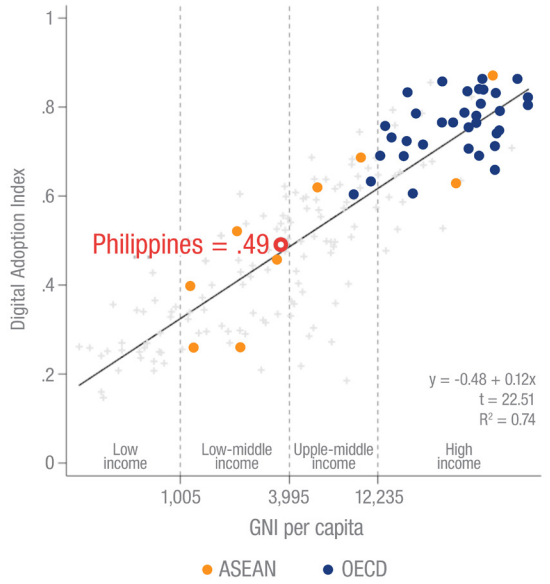
The digital economy in the Philippines is far from reaching its full potential, and the country's performance generally trails behind many regional neighbors. The World Bank Digital Adoption Index (DAI) and its three sub-indices on people, government and business reveal that the Philippines fell behind the world average on digital adoption (Box 1.3). In general, the country's digital adoption is on par with its level of economic development when compared to countries around the world, but it performed poorly compared with regional peers (Figure 1.7 and Figure 1.8). Among the three key agents in the Philippines, businesses and people are more accustomed to the use and adoption of digital technology than the government. The relatively poor performance in digital adoption can be traced to a multitude of factors including problems of digital infrastructure and connectivity, high cost of broadband and internet services, and uneven quality of internet service. Equally important, the lack of competition in other sectors within both the analog and digital enablers like logistics also contribute to the Philippines trailing behind peers in digital adoption.

Digital adoption by businesses in the country is higher than the average ASEAN country, and slightly higher than the per capita income would predict (Figure 1.9). Business adoption is comparable to regional peers like Malaysia, Thailand and Vietnam, but trails Singapore by a wide margin. The Philippines performs better than its average (median) regional and income group peer on two of the three indicators that comprise the business sub-index: the percent of business establishments with a website and the international internet bandwidth per user. It performs poorly, however, in the number of secure servers per capita. The DAI business sub-index results suggest that the average Philippine firm tends to be more digitally savvy – and ready to connect to customers through the internet – than the average firm in ASEAN; however, it also suggests the lack of a secure digital infrastructure and system robust enough to support a potentially wider increase in e-commerce traffic and digital financial transactions.

Figure 1.7. Digital adoption in the Philippines lags some of its regional peers

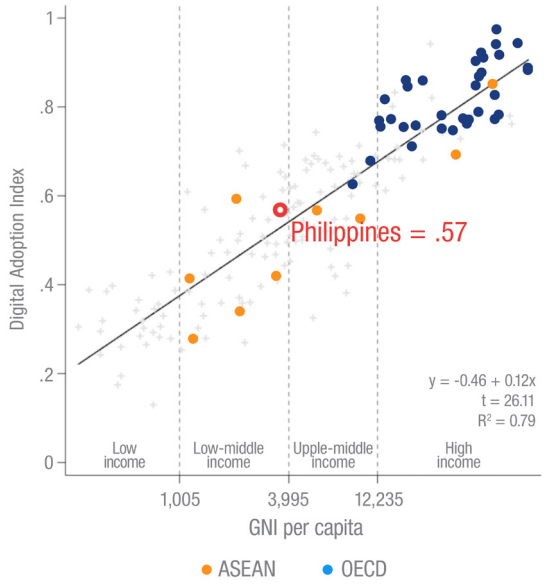
Source: World Bank (2018).
Note: Droplines show the standardized difference of indicator values between ASEAN countries and the world average.

Figure 1.8. Overall digital adoption in the Philippines is about what income would predict.



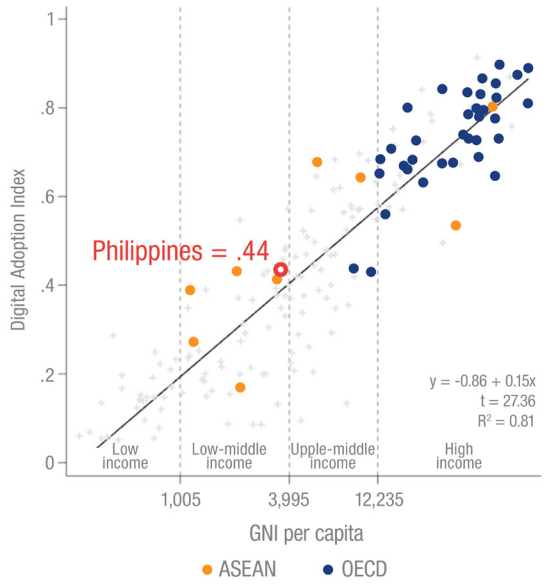
Source: World Bank (2018).

Figure 1.9. Business adoption is higher than the average lower-middle income or ASEAN country, and slightly higher than income would predict.



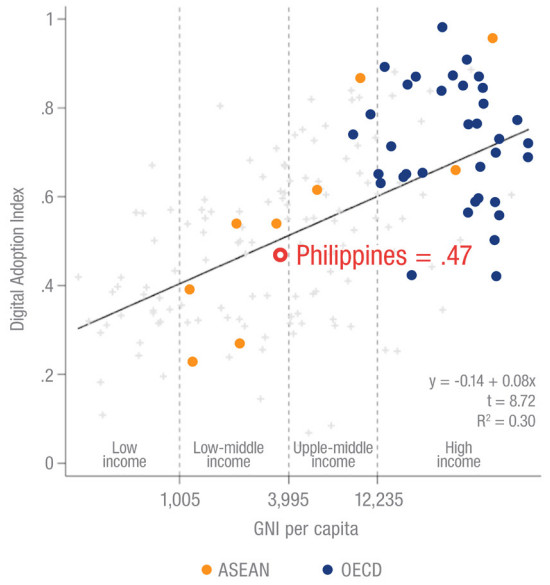
Source: World Bank (2018).

Figure 1.10. Adoption by people is higher than the average lower-middle income country and comparable to ASEAN average.



Source: World Bank (2018).

Figure 1.11. Adoption by government is lower than the average ASEAN country and lower than income would predict.



Source: World Bank (2018).

Meanwhile, digital adoption by people is comparable to ASEAN average, and higher than per capita income would predict (Figure 1.10). Filipinos are, on average, as digitally savvy as their regional counterparts, performing slightly better than Indonesia and Vietnam, but worse than Malaysia, Thailand and Singapore in the DAI people sub-index. The number of mobile-cellular telephone subscriptions per capita in the Philippines is lower than the average in the region, but close to the world average of more than one subscription per person. This nominally indicates market saturation in the Philippines, with many people having more than one subscription, and some subscriptions on record are not used. With the prevalence of mobile hand-held devices, Filipinos connect to the internet more through mobile broadband services compared to the more stable fixed broadband services.

Digital adoption by the government underperforms, scoring lower than the average ASEAN country and lower than per capita income would predict (Figure 1.11)**.** The Philippines performs worse than regional peers in government's digital adoption. Among the three indicators of the government sub-index, the Philippines does slightly better than the average country in core administrative systems and online public services, but below average in digital identification. Among the key weaknesses were the fragmentation of human resources management information system (HRMIS) and government payroll across line ministries; the disconnect of online portals such as the e-custom portal to other government systems; the limitations of e-procurement systems from allowing online transactions; and the inability in the budget system to dynamically query from line ministries or financial management information systems (FMIS). Likewise, some of the Philippines' existing paper-based system imposes a commensurate drag on the government score.

Box 1.3. Digital Adoption Index

The DAI is a worldwide index developed for the World Development Report 2016: Digital Dividends. It measures the depth of digital adoption across three dimensions of the economy: people, government, and business. Each sub-index comprises technologies necessary to promote development in the digital era: expanding opportunities and improving welfare for people; increasing the efficiency and accountability of service delivery for government; and accelerating broad-based growth for business.

The DAI Economy is a simple sum of three sub-indices (Table 1.1). The business sub-index is the simple average of four normalized indicators: percentage of businesses with websites, the number of secure servers, download speed, and 3G coverage in the country. The people sub-index is the simple average of two normalized indicators from the Gallup World Poll: mobile access at home and internet access at home. Finally, the government sub-index is the simple average of three sub-indices: core administrative systems, online public services, and digital identification. The country with the highest level of adoption in a given sub-index achieves the maximum score of 1, and the country with the lowest level of adoption achieves the minimum score of 0.

Table 1.1. The DAI comprises representative indicators for digital adoption by business, people, and government

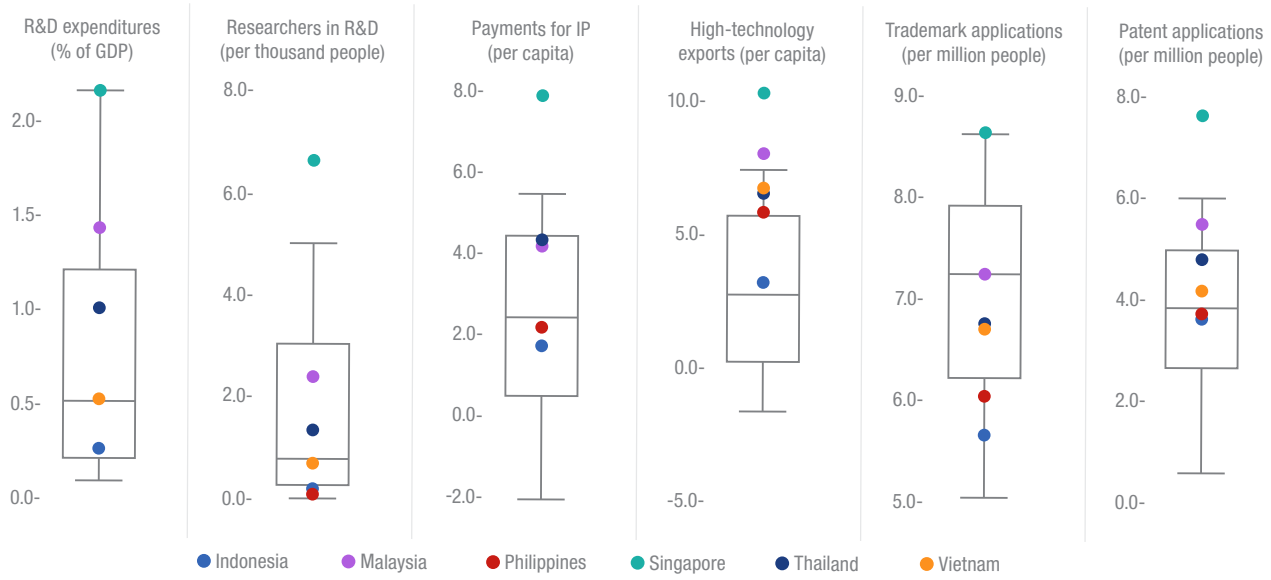
Sub-index Business	Sub-index Business	Indicator
	Measures the quality of digital infrastructure needed for e-commerce and other business functions	Business websites Internet bandwidth Secure servers
People	Measures the extent and quality of individuals' connection to the digital world	Mobile-cellular subscriptions Mobile broadband Internet use Fixed broadband subscriptions
Government	Measures the adoption of government systems, identification schemes, and services to better serve the public	Core administrative systems Digital identification Online public services

Source: World Bank (2018).

Innovation and Firm-level Adoption of Digital Technology

Innovation and entrepreneurship can create and expand the new digital economy, and the Philippine's innovation system and entrepreneurship ecosystem have room for growth. The recent rise in Philippine ranking in the Global Innovation Index from 54th spot (out of 129) in 2019 to 50th spot (out of 131) in 2020, reflects an improvement on the innovation capabilities of the country. The Philippines has improved in both leading indicators of innovation inputs and outputs. As in most cases, the Philippines resembles Indonesia, Thailand, or Vietnam, but trails Malaysia and Singapore by a wide margin. There is, thus, space for improvement. According to the most recent data, the Philippines spends only 0.16 percent of its GDP on research and development and has only 106 researchers per million inhabitants—below the 25th percentile worldwide. Those inputs yield mixed results. Payments for intellectual property (IP) of US$8.60 per capita, trademark applications of 417 per million inhabitants, and patent applications of 40 per million inhabitants are all below average, with trademark applications particularly low. In contrast, high-technology exports of US$318 per capita is relatively high, above the 75th percentile (Figure 1.12). Still, the Philippines seem to be leveraging relatively low inputs into greater outputs, suggesting a higher rate of return than other economies. If firms involved in high-technology exports were better able to absorb technology, and that learning spilled over into the rest of the economy, it could spur further development.

Figure 1.12. The Philippines has low innovation inputs relative to its innovation outputs
Latest values for select countries on indicators of innovation inputs and outputs, versus the worldwide distribution



Source: World Bank (2020a).
Note: Payments for IP, high-tech exports, and trademark and patent applications are logged. Boxplot shows the worldwide distribution, with whiskers at the 10th and 90th percentiles; the box spanning the interquartile range; and the center line at the median.

The Philippine's entrepreneurial ecosystem is nascent. According to the Global Entrepreneurship Monitor (GEM), the self-perception of Filipinos on entrepreneurship and subsequent entry into entrepreneurial activity is among the highest in ASEAN countries (Licaros-Velasco et al., 2017). However, the rate of failure or business discontinuance is also high, leading to a low rate of businesses that exist for more than 3.5 years. The challenges faced by the Philippine's entrepreneurship ecosystem are reflected with the country ranked 86th out of 137 in the 2019 Global Entrepreneurship Index, lagging behind its neighbors (Acs et al., 2019). The index measures the quality of entrepreneurship and the extent and depth of the supporting entrepreneurial ecosystem through 14 indicators covering perceptions, skills, human capital, risks, among others. For the Philippines, the entrepreneurship

ecosystem does well with high levels of product innovation, human capital, and startup skills, but suffers from human capital, and startup skills, but suffers from a still relatively small number of tech startups contributing to subdued levels of technology absorption, risk capital, and internationalization. Manila has recently been ranked 36th out of 100 emerging startup ecosystems in the Global Startup Ecosystem Report 2020, citing market reach, talent and experience; and vibrant fintech and e-commerce sub-sectors among its strengths.

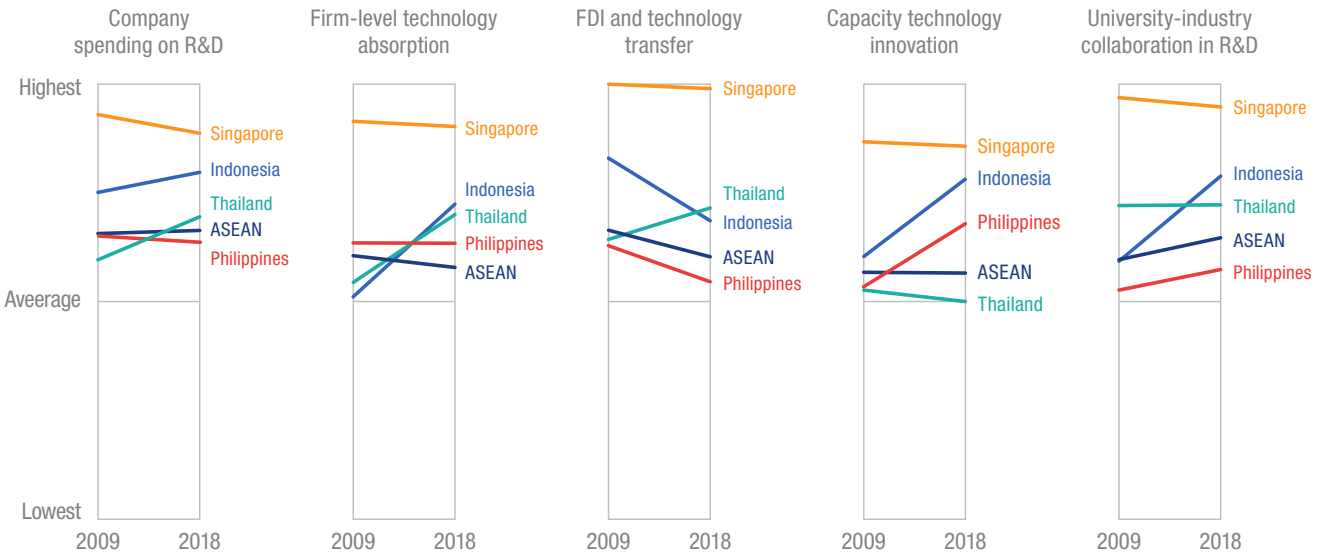
Table 1.2. The Philippines entrepreneurship ecosystem lags most of its neighbors.

2019 Global Entrepreneurship	Philippines	Indonesia	Vietnam	Thailand	Malaysia	China	Singapore
Overall Ranking	86	75	73	54	43	34	27
Entrepreneurial Attitude (Opportunity Perception, Startup Skills, Risk Acceptance, Networking, Cultural Support)	76	63	89	74	34	43	39
Entrepreneurial Abilities (Opportunity Startup, Technology Absorption, Human Capital, Competition)	88	65	69	54	44	47	21
Entrepreneurial Aspiration (Product Innovation, Process Innovation, High Growth, Internationalization, Risk Capital)	94	102	66	45	47	16	21

Source: Acs et al. (2019)

Supporting firms' ability to innovate and learn would encourage the development of new products and services for the digital economy. The areas for support may focus on indicators where the Philippines has underperformed compared to the average ASEAN country such as company spending on research and development, university-industry collaboration in research and development (R&D), and foreign direct investment (FDI) and technology transfer. Over the last decade, the Philippines has surpassed the ASEAN average in capacity for innovation and firm-level technology adoption, but it still lags Singapore, Thailand, and Indonesia in all categories but one (Figure 1.13).

Figure 1.13. The Philippines lags regional peers in measures of firms' ability to innovate and learn



Source: WEF, Global Competitiveness Index, 2009 and 2018.

Firm-level adoption of general business function technologies, such as ICT and the internet in business transactions, in the Philippines could be further enhanced to grow e-commerce activities and improve overall productivity and product value. A survey of business executives by the WEF suggested that the extent to which firms in the Philippines use ICTs for transactions with other businesses is similar to Thailand, Indonesia, Vietnam, and China (Baller et al., 2016). Considering the high penetration of the internet across the general population and their interest in searching for and purchasing products online, firms could adopt e-commerce technologies to reach potential customers and grow their businesses. It also suggests that the firms are missing out on opportunities to integrate ICTs into an innovation-conductive environment that boost their productivity.

Availability, adoption and use of the latest technologies by firms in the Philippines is neither limited nor extensive but has fallen behind its regional peers in recent years. Introduction of new technologies through FDI, general availability of latest technology, and firms' adoption of such technology is only slightly extensive in the Philippines, as indicated in the 2017-2018 Global Competitiveness Report (Schwab, 2017). Firms tend to use somewhat labor-intensive processes as opposed to applying the latest technologies in their production processes. Other countries in the region, except for Vietnam, are currently ahead of the Philippines in this regard. For instance, only 9 percent of firms in the Philippines have obtained internationally recognized quality certifications and only 11 percent of firms use technology licensed from foreign companies, lower than in most peers (World Bank, 2019b).

Data on firm-level adoption of specific technologies are being gathered to identify opportunities to support the growth of digital entrepreneurship. There have been few systematic attempts to measure firm-level technology adoption through firm surveys in the Philippines. While a handful of specific case studies indicate limited information on firm-level adoption of general business function technologies and sector-specific technologies, these studies strongly suggest that adoption of technology has contributed to the firms' productivity and growth. Recently, the DTI has conducted an initial firm level survey using the Manufacturing Enterprise Solutions Smart Manufacturing Maturity Index. The aim of the survey is to assess the level of technologies used by manufacturing companies in the Philippines and evaluate their readiness for adopting Industry 4.0 technologies. This will help DTI in crafting evidence-based and data-driven Industry 4.0 policy interventions to help firms in their Digital Transformation journey.

About three quarters of SMEs in the National Capital Region (NCR) and the Calabarzon region use digital technologies for accounting and financial management operations, and these firms are less credit-constrained. A 2018 survey of 480 SMEs in NCR and the neighboring Calabarzon region showed that 72 percent of SMEs have a moderate to high use of digital software for accounting and financial management (AFM) operations (Flaminiano and Francisco, 2019). These firms were 16 percent less likely to be credit-constrained (that is, unable to get a loan from formal sources, obtained loan was not enough, or did not apply for a loan although needed). These firms were also 12 percent less likely to be constrained when dealing with informal sources of loan. Using digital software for AFM improves the firm's ability to organize its records and use the statements to banks and other lending institutions, making them more attractive to external creditors.

Firms in a rapidly growing business process outsourcing (BPO) sector are integrating cloud technology and robotic process automation (RPA) into processes and applications, resulting in increased productivity and business model sophistication. A survey of 575 firms suggested that large firms and SMEs alike have invested in using an online network of remote servers to store, manage and process data through standardized applications over a cloud platform (that is, cloud technology) and software robots with artificial intelligence algorithms capable of performing highly structured and ordinary tasks (that is, RPA) (Orozco, 2017). These investments are shifting the Filipino BPO firms to become

more specialized and knowledge-based BPOs to cover fraud analytics, data integration, project management, R&D, mergers and acquisitions valuation, and product profitability analysis, among others. As the BPO sector becomes more sophisticated, skills requirements in the Filipino BPO sector will change from English proficiency and service-oriented personality, which are sufficient for the currently dominant labor-intensive, language-based call center processes. Workers with specialized training and knowledge in engineering, finance, business, law, and so on, will likely to be in demand to serve the knowledge-based BPOs.

Digitalization Momentum

Despite below-global average digital technology adoption, there is a digitalization momentum the Philippines can leverage on. The Philippines is characterized with high momentum, and significant headroom for growth despite a low current state of digital transformation (Chakravorti and Chaturvedi, 2017). The country holds the potential of catching up with some of the current leaders, provided the infrastructure, institutions and enabling regulations are afforded by the digital economy. To this end, the government is keen to upgrade the country's digital infrastructure with policies and programs being rolled out to encourage digital adoption and entrepreneurship. Meanwhile, domestic firms remain attuned to the digital trend, actively making use of websites, mobile applications, and online platforms to complement and expand business operations, which reflects the Philippine's rank at 10 out of 141 in companies embracing disruptive ideas in WEF's 2019 Global Competitiveness Index (Schwab, 2019). Furthermore, there is emergence of Filipino startups that seek to leverage technology innovations in the field of financial services, ICT, software, logistics, mobility, and food services. More and more Filipinos are connecting online, and engaging on social media, media streaming services, e-commerce, and the sharing economy. This momentum holds promise, and if supported effectively, will lead the Philippines to reap the developmental rewards of the digital economy.

The next chapters assess the key enablers for digital transformation in the Philippines. Chapters 2 and 3 cover digital infrastructure and digital payments, respectively, which are key enablers to ensure participation in the digital economy. To harness the old economy, chapter 4 goes into deep dive on the logistics system, an important analog complement that support e-commerce. The next two chapters focus on the expansion of the new economy through digital taxation (chapter 5), and the business environment (chapter 6). Chapter 7 caps the report with highlights on the role of public policies to manage and support the digital economy, and protect people from risks. The goals of the chapters are to present the central issues and challenges, and offer policy advice and recommendations. These chapters, all taken together, point to the urgent need to digitalizing the Philippine economy for a better normal under COVID-19 .

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CHAPTER 2

DIGITAL INFRASTRUCTURE – ACHIEVING FASTER, MORE AFFORDABLE INTERNET FOR ALL

Digital technologies have emerged as key in addressing the impact of the COVID-19 pandemic. They provide the opportunity for individuals, businesses, and governments to cope with social distancing measures, ensure business continuity, and continue public service delivery. Never has this point been more glaring than now when the economy has virtually ground to a halt; individual lives disrupted with inability to freely move and gather; and the government compelled to deliver unprecedented social programs to support the lives and livelihoods of Filipinos. Amid the lockdown, the digitalization momentum has accelerated. Commercial banks have reported growth surge in daily sign ups on online and mobile banking portals while an incumbent telecommunication player has reported a more-than-double increase in mobile data traffic in the first half of 2020 (Abadilla, 2020).

Weak digital infrastructure in the country is hampering the effective use of digital technologies. Not all Filipinos or Filipino businesses are fortunate to have access to digital technologies or possess the digital skills to reap the benefits of digitalization. Digital infrastructure is limited in remote and rural areas, and where they are available, the internet services are relatively expensive and of poor quality. This has led to a digital divide between those with and without access to reliable internet, which contributes to unequal access to services that are delivered via the internet. The unequal access to the internet poses a challenge to the effective and intended delivery of digitalization. For instance, the roll out of online classes in select educational institutions was eventually suspended after learning that not all students have reliable internet connections; or that work-from-home arrangements fail when workers are not equipped with reliable internet connections.

Affordable, reliable, and widely available internet services are essential to support economic recovery post COVID-19, and more equitable growth and competitiveness in the long term. The ongoing COVID-19 outbreak and imposed ECQ highlight the need to accelerate the digitalization of Philippine economy. This would require having a resilient and affordable internet service which enables business continuity in the current context, disease tracking and monitoring, supply chain management, expansion of e-commerce, digital financial services, technology-based entrepreneurship, and digital public service and social protection delivery.[17]

The current state of internet in the Philippines, however, calls for urgent and substantial improvements for the digital economy to play a key role in the economic recovery. The broadband (high-speed) internet penetration level of the Philippines is "below the expected level of countries with comparable per capita income" (World Bank, 2019). For instance, 70 percent of Filipinos are active mobile broadband subscribers, compared to the ASEAN regional average of 88 percent (ITU, 2018); 4G/LTE mobile broadband network coverage is at 72 percent of the population versus the regional average of 82 percent (Opensignal, 2019); 4 percent of Filipinos are subscribed to fixed broadband, compared to the regional[18] average of 10 percent (ITU, 2019); 3G/4G mobile average download speed is 7 Mbps, compared to the regional average of 13.26 Mbps (Opensignal, 2019); and fixed broadband average speed is at 26 Mbps versus the regional average of 59 Mbps (Ookla, 2020) (Table 2.1).

Table 2.1. Philippines vs. ASEAN penetration level and speed

	Philippines	ASEAN
Share of population which are active broadband subscribers	70 percent	88 percent
4G/LTE mobile broadband network coverage	72 percent	82 percent
Share of population which are fixed broadband subscribers	4 percent	10 percent
3G/4G mobile average download speed	7Mbps	13Mbps
Fixed broadband average download speed	26Mbps	59Mbps

Source: Opensignal (2019), Ookla (2020), ITU (2018)

17 There is discussion globally about establishment of a meaningful connectivity standard defined as: when a user has access to a smartphone and or 4G equivalent quality mobile internet, along with reliable fixed wired or wireless access at home, school, or work every day.
18 "Regional" here refers to Southeast Asia, which includes Brunei, Cambodia, Indonesia, Laos PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam.

Increasing digital adoption and its contribution to economic growth requires a whole-of-government business-enabling approach. The Philippines' digital infrastructure has always been private sector led. From the monopoly and fixed line era, the country shifted to mobile services, as the telecommunications sector was liberalized, and new market entrants competed. However, unchecked mergers and acquisition over the years have resulted in a highly concentrated market, with two dominant players each controlling and operating their own single, vertically integrated network. The current state of internet in the Philippines is thus the result of under-investment in broadband internet network resulting from insufficient competition and an outdated legal, policy and regulatory framework and makes the case for a whole-of-government business-enabling approach to unleash the full potential of the digitalization of the Philippine economy.

Market failures in the provision of digital infrastructure

The digital infrastructure—defined here as the physical networks and resources that facilitate Internet connectivity, including radio spectrum—is the basic foundation of the digital economy. The Internet is seen as a critical enabler for sustainable development globally. Its effects on human lives over the past two decades have become more apparent and increasingly more profound that the United Nations' Sustainable Development Goals (SDGs) have included as one of its targets the significant increase in "access to information and communications technology (ICT)" and the provision of "universal and affordable access to the Internet in least developed countries by 2020." As the Internet cuts across many sectors, it is believed that the achievement of this target is instrumental in addressing many other development goals and targets. Digital infrastructure requires physical facilities and resources that facilitate connection to the Internet, whether fixed or mobile.[19] This includes different network segments that allow packets of data to be transmitted to their destination, as summarized in Figure 2.1. See Box 2.1 for the Internet Network System.

Box 2.1. Digital Infrastructure Components

The Philippines digital infrastructure consists of the following components:

(i) First mile. The first mile or backbone links the Philippines to the worldwide web. The first data transmission link is made between international networks made up of international submarine cable systems and satellites, and associated terrestrial infrastructure, and the domestic backbone that connects the cable landing stations to the major regions throughout the country. It should be noted that the Philippines is well-served by international cable networks;

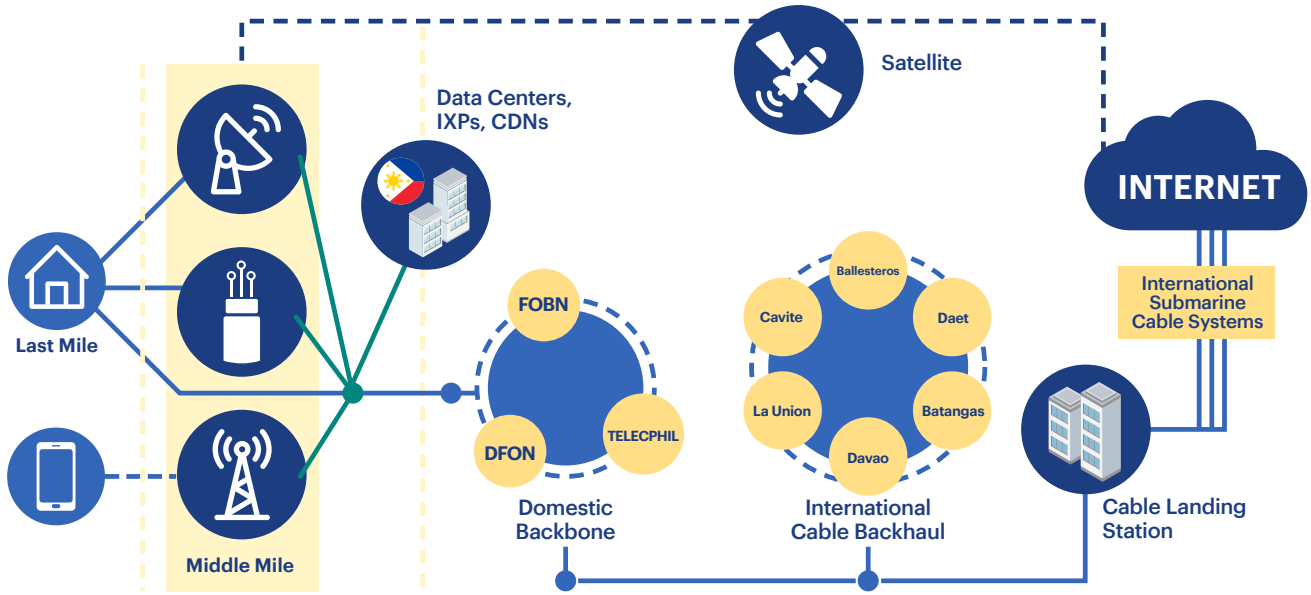
(ii) Middle mile. This connects the domestic backbone to the core networks of the telecom internet service providers (ISPs) in provinces and/or to cities and municipalities through Points of Presence.

(iii) Last mile. This refers to the towers and cables that provide connections to computers, phones, mobile devices of end users. Users include government offices, public facilities, businesses and households

(iv) Digital infrastructure also includes: internet exchange points (IXPs) that allow exchange of local internet traffic; content delivery networks (CDNs-geographically distributed servers coordinated for fast delivery of internet to users); and data centers that host servers containing digital content and services.

19 Fixed internet connection pertains to that which is accessed in homes and other physical establishments, while mobile connection is accessed typically through cellular phones.

Figure 2.1. How the Philippines Connects to the Internet



Source: DICT (2017), with author's edits

These networks transmit packets of data that are delivered to end-user devices through fixed (wired) or mobile (wireless) technologies. Fixed internet connections include optical fiber, cables or copper wires used for fixed line telephony. Installation of fixed internet services typically requires some civil works. Mobile internet is delivered to mobile phones or other devices (for example, tablets) through radio signals transmitted via networks of towers. These radio signals are transmitted at different frequencies (measured in megahertz or gigahertz) of the electromagnetic spectrum, affecting the speed of data transmission, from 2G (lowest) to 3G, 4G, and 5G (highest). The speed of transmission (for example, uploading/downloading data) is measured in megabits or gigabits per second. A country's spectrum is a scarce resource managed by government regulators. It is divided into different frequency bands that are allocated to particular services such as broadcast TV, radio, and mobile telephony/internet.

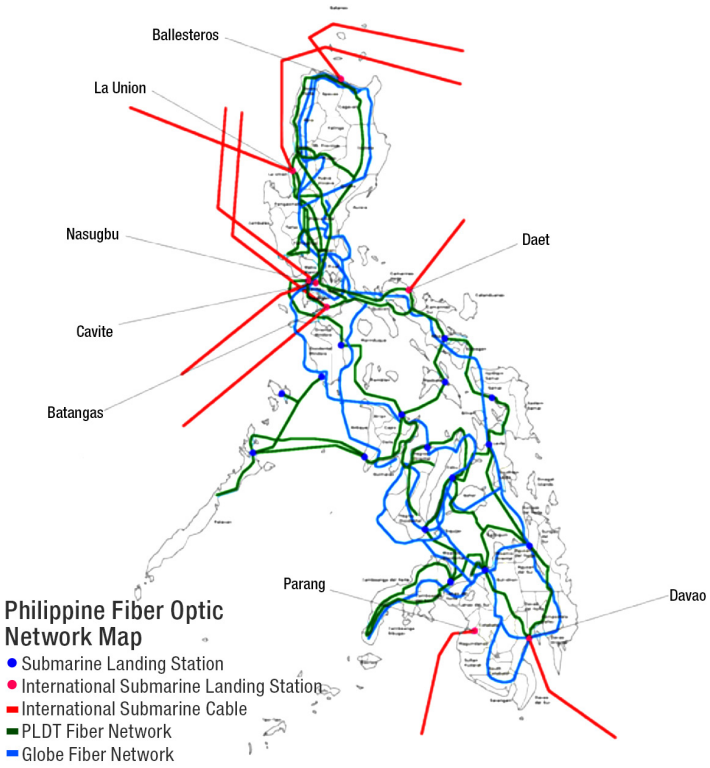
The Philippines' market for internet services is "effectively a duopoly market" (World Bank, 2019). As a result of mergers and acquisitions, and the absence of a comprehensive competition law[20] before 2015, the market became consolidated and ended up with two dominant players, PLDT and Globe, who have almost equal market share in all segments.[21] The two dominant telecommunications companies (telcos) each operate a vertically integrated network, where one company has a significant stake and operates in all segments of the digital infrastructure—from the international submarine cable, cable landing station, backbone, middle mile, and last mile network, down to the device and equipment at the customer premises. This can be disadvantageous to smaller ISPs particularly outside Metro Manila. For example, there are no open access or nondiscriminatory pricing regulations for the domestic backbone that would guarantee any service provider access to the backbone infrastructure built by PLDT or Globe. Also, there are no regulations that prevent price discrimination, which contributes to the high price of wholesale broadband access. According to the industry's regulatory body, the National Telecommunications Commission (NTC), there is 'limited competition' in international connectivity and nationwide backbone networks, while the access network can be considered 'very competitive' for fixed connectivity but still 'limited' for mobile networks.[22] For mobile broadband services, competition between the two providers has largely focused on increasing market shares.

20 Prior to the enactment of the Philippine Competition Act in 2015 and the creation of the Philippine Competition Commission, it was the sole responsibility of the NTC to review and approve mergers and acquisitions in the telecom sector.

21 Telecommunications is classified as a public utility in the Philippines and is subject to foreign ownership limitation of 40 percent. PLDT has investment from the Salim Group of Indonesia and NTT Docomo of Japan while Globe Telecom has investments from Singtel of Singapore. Dito Telecom, a new entrant that has not yet commenced operations, has investments from China Telecom.

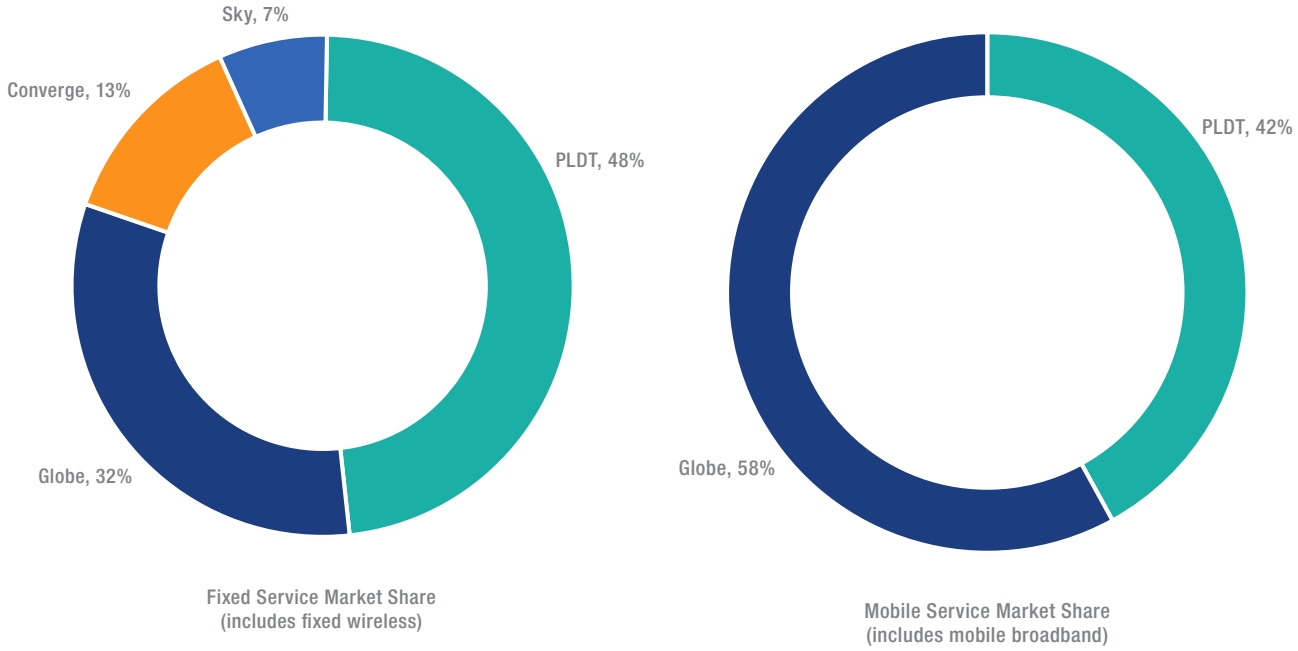
22 While there are more than ten providers of fixed-line and fixed wireless broadband networks, including PLDT and Globe, there are only two mobile network providers in the country. Source: presentation by NTC Deputy Commissioner Edgardo Cabarios at the celebration of the 25th anniversary of the Philippine Internet, March 29, 2019, Richmonde Eastwood Hotel, Quezon City.

Figure 2.2. Fiber optic network and submarine cables in the Philippines



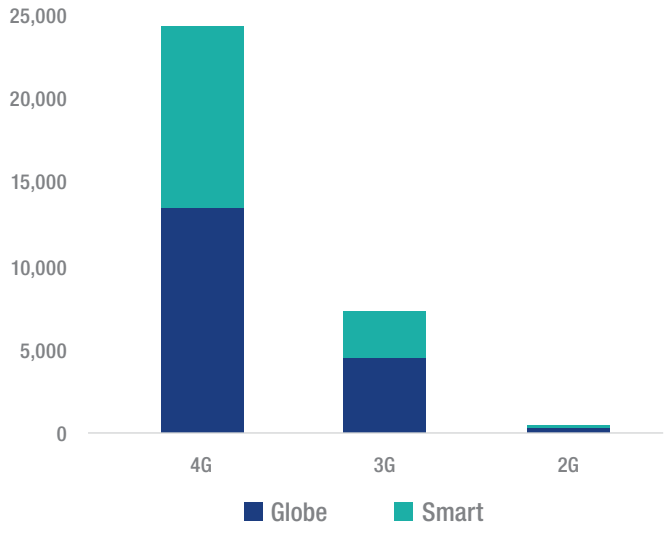
The number and location of cell sites – which determine the access and quality of mobile Internet – is among the lowest in the region. The DICT estimates the number of towers to be less than 20,000 in 2019 (Pateña, 2018), far below Vietnam's 70,000 and Indonesia's 90,000 towers (Camus, 2018). This equates to about 5,400 people per tower in the Philippines, compared to 1,364 in Vietnam and 3,000 in Indonesia. More recent data gathered by Project Bandwidth and Signal Statistics (BASS)—a volunteer, non-profit group that measures mobile broadband and Wi-Fi quality of service through crowdsourced data—detected a total of 32,183 unique cell site IDs, of which 76 percent are 4G/LTE (see Figure 2.4 and Figure 2.5). As a result, mobile network coverage and signal strength vary widely across the country (Figure 2.6).

Figure 2.3. Fixed and Mobile Broadband Market Share*



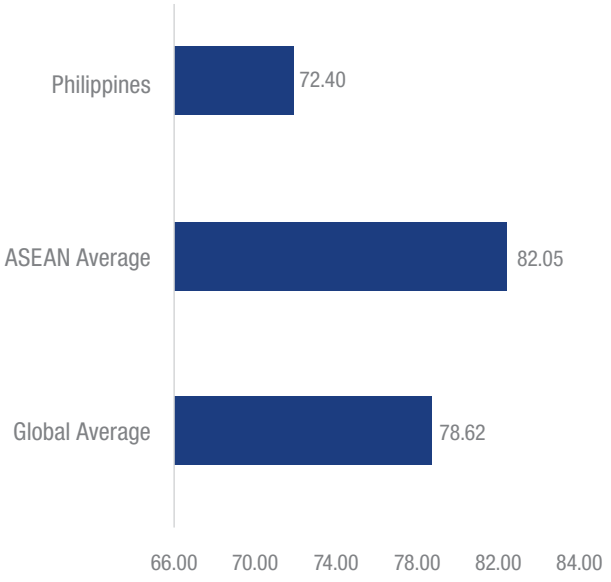
Note: Total of fixed broadband and mobile service markets are based on combined total subscribers of indicated service providers.

Figure 2.4. Number of Unique Cell Site IDs Detected (as of February 2020)



Source: Project BASS (2020).
Note: Number of Cell sites reflects those detected within range when subscribers use the BASS app.

Figure 2.5. 4G Network Coverage (% of Population)

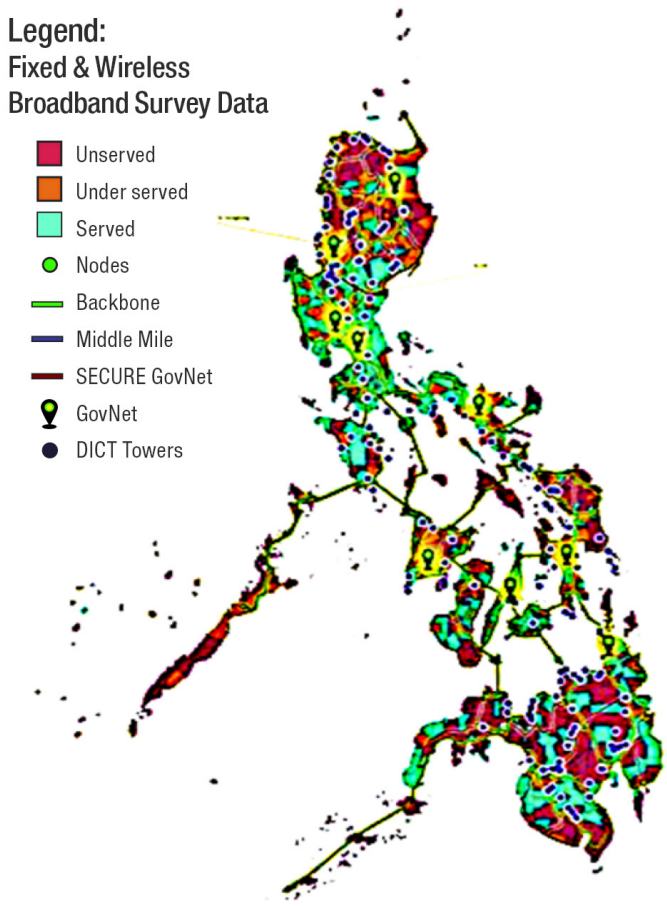


Source: Opensignal (2019)
Note: Availability is the percentage of time that 4G mobile device users were able to access a 4G signal.

Fixed internet access is also very limited in the Philippines. The Philippines is much further behind fiber deployment than similar countries with a comparable GDP per capita. For example, Vietnam[23] has 170 percent more fiber connections than the two dominant Philippine operators have of all types of fixed broadband subscribers combined[24].

23 In 2017, the Philippines had a GDP per capita, PPP (current international $) of $8,343 while Vietnam had $6,776 (World Bank, 2017a).
24 Extrapolated from citations of Philippines fixed line subscribers and Vietnam fixed lines FTTH connections extensively cited in the FTTH section (See Mirandilla-Santos et al., 2018).

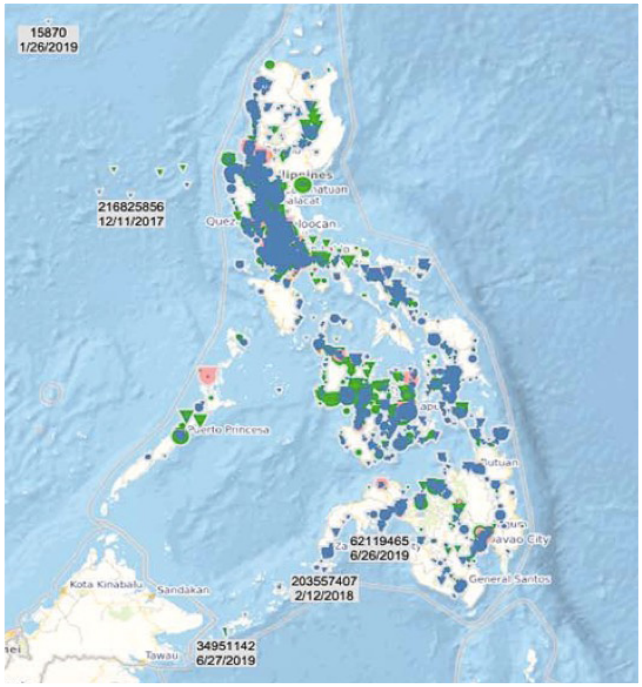
Figure 2.6. The Digital Divide - Unserved and Underserved Areas



Source: DICT, 2017. Note that this is based on NTC survey data from 2016.

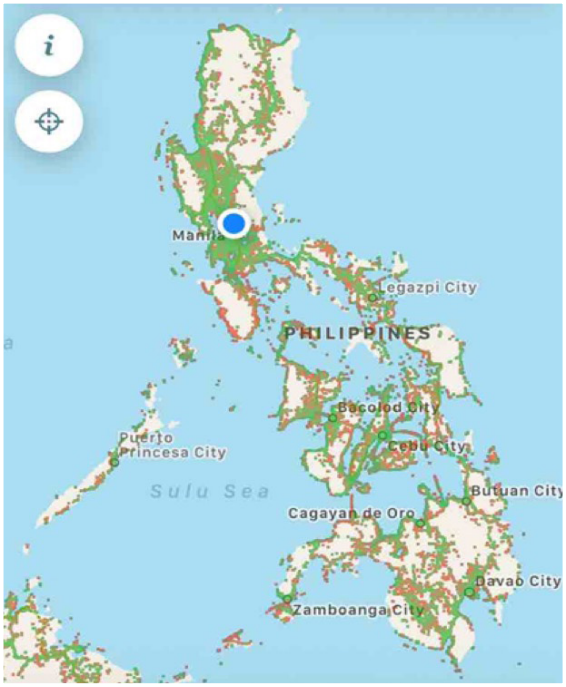
As a result, the Philippines is still experiencing a very significant digital divide. In 2018, the United Nations Broadband Commission reported that about 40 percent of the Philippines' total population of 103 million and about 57 percent of the country's 23 million households did not have internet access (ITU, 2018). Obtaining updated granular data about access and quality by region/municipality remains challenging so the full extent of the digital divide is difficult to quantify. Figure 2.6 is based on a survey by the regulator (NTC) in 2016. In addition, open source/crowdsourced data on mobile network (the BASS App) illustrates the extent of cell site coverage by region and open source/ crowdsourced data (Opensignal) illustrates signal strength or quality of service by region (see Figure 2.7 to Figure 2.13). These data sets illustrate regional disparities in the access and quality of internet service. Some regions are very remote and may only be reachable via satellite at this stage, or potentially by emerging technologies.

Figure 2.7. Philippines cell site locations identified by the BASS app



Note: Blue color indicates Globe Telecom, green is PLDT/Smart, pink is PLDT, and orange is PLDT/Sun.

Figure 2.8. Philippines cellular signal strength recorded by OpenSignal



Note: Blue color indicates Globe Telecom, green is PLDT/Smart, pink is PLDT, and orange is PLDT/Sun.

Figure 2.9. Unique cell sites identified by BASS (Luzon)

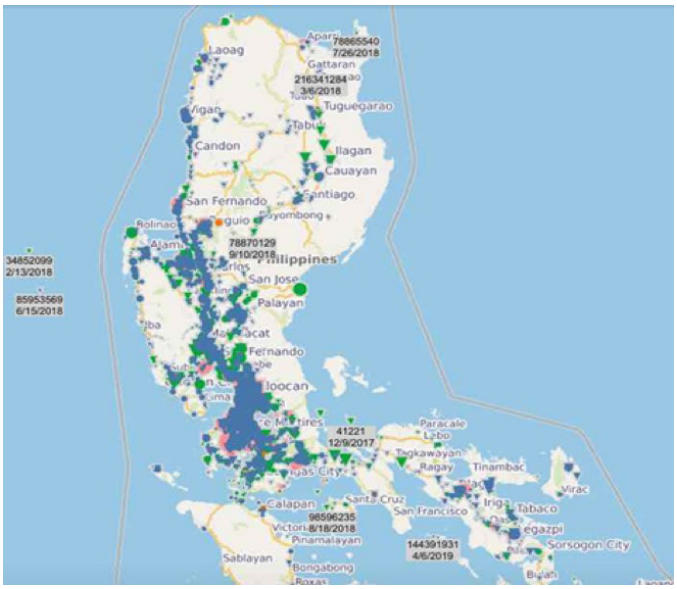


Figure 2.10. Cellular signal strength measured by OpenSignal (Luzon)

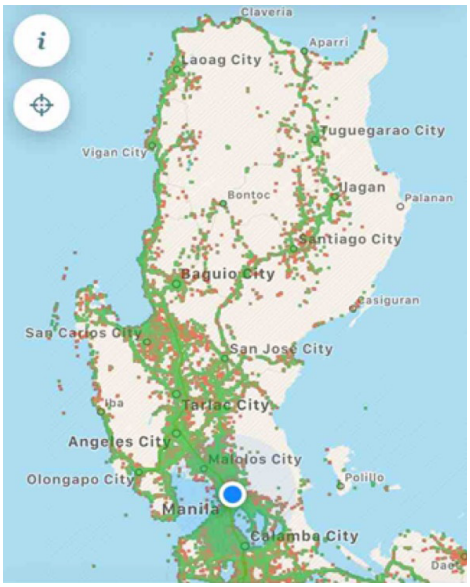


Figure 2.11. Unique cell sites identified by BASS (Palawan, Visayas)

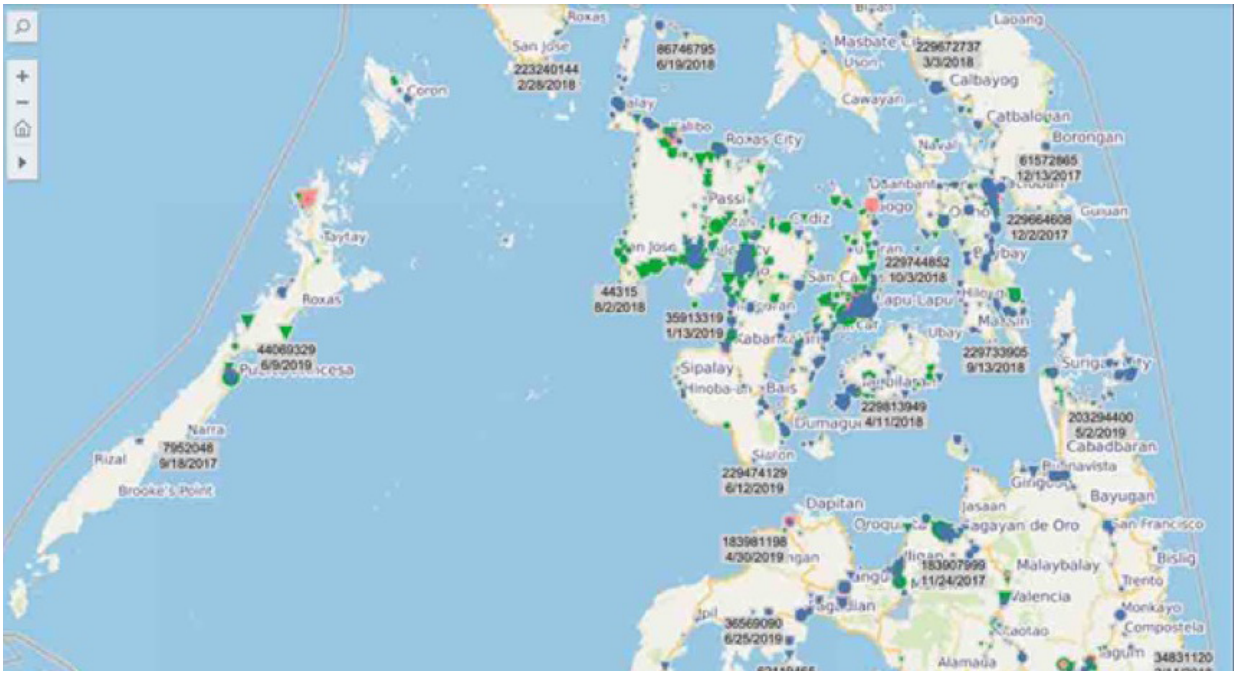
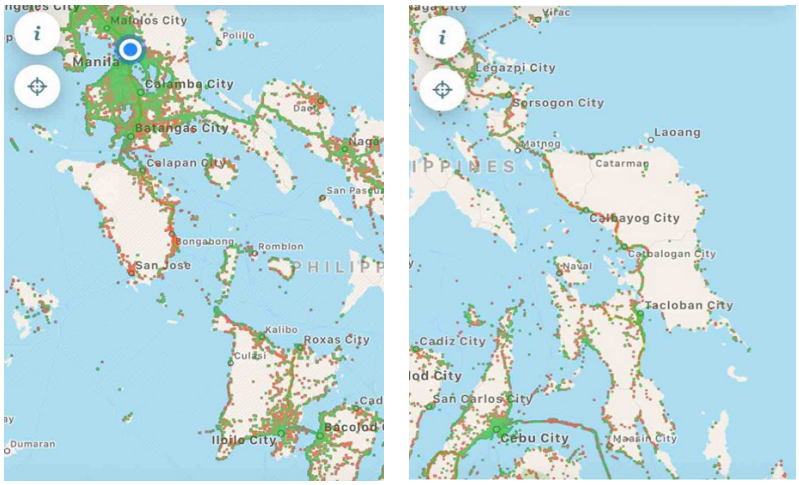


Figure 2.12. Cellular signal strength measured by OpenSignal (Palawan, Luzon)

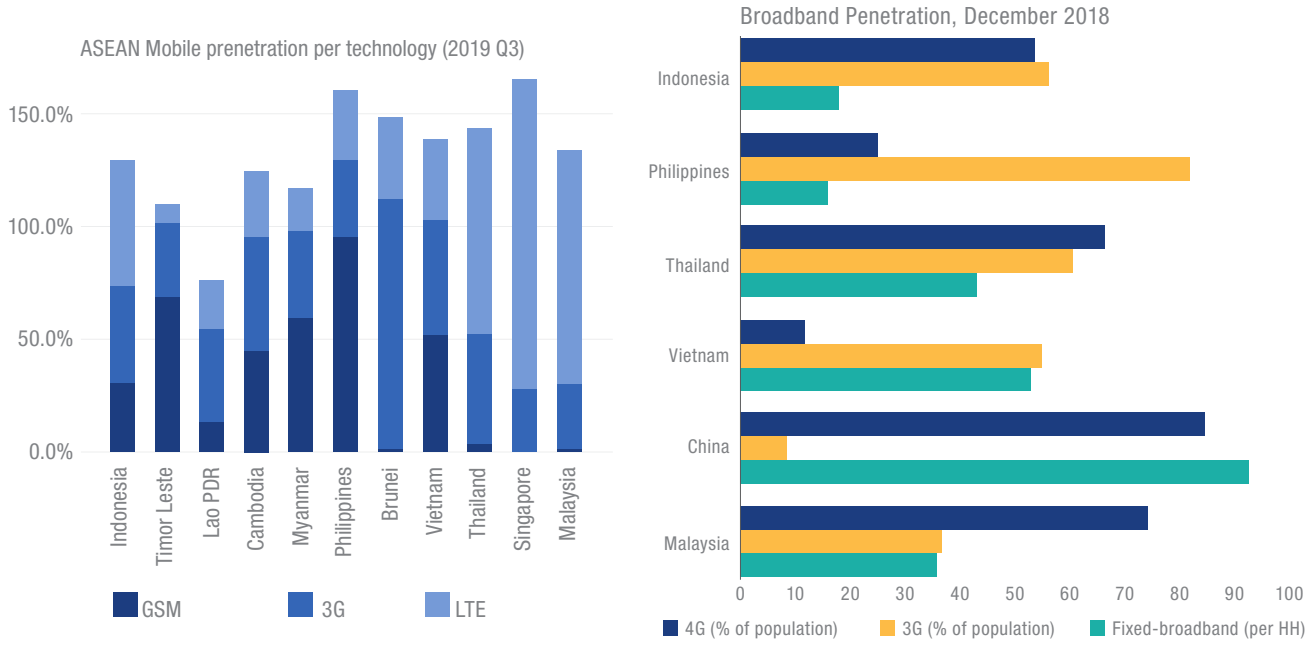
Figure 2.13. Cellular signal strength measured by OpenSignal (Visayas)



This digital divide, between people with and without access to internet, contributes to unequal access to services that are delivered via the internet. For example, in 2016, the Department of Education found that around 74 percent of 46,700 public schools nationwide are unable to connect to internet facilities in their communities, despite having the budget allocation from the government (DepEd, 2016).[25] About 70 percent or 34,500 of these schools without internet connectivity have electricity.[26] One explanation for this is the lack of fixed infrastructure that is necessary to connect institutions or feed enough bandwidth to the mobile networks that reach those areas. Investment in fiber optic networks in the country is quite recent and there has been no massive effort to connect those outside the urban centers and high-income communities, unlike in other Asian countries such as Indonesia and Vietnam. Infrastructure sharing arrangements—which would lower the cost of fixed broadband deployment—are also not in place. This is discussed in more detail below.

The Philippines is also on the wrong side of the regional 'digital divide'. Compared to its middle-income ASEAN neighbors, fixed and mobile broadband internet penetration in the Philippines are relatively low. As shown in Figure 2.14, GSM (2G or basic mobile and text messaging service) remains the dominant mobile technology across the country.

Figure 2.14. Broadband internet penetration in ASEAN member countries (% of population)

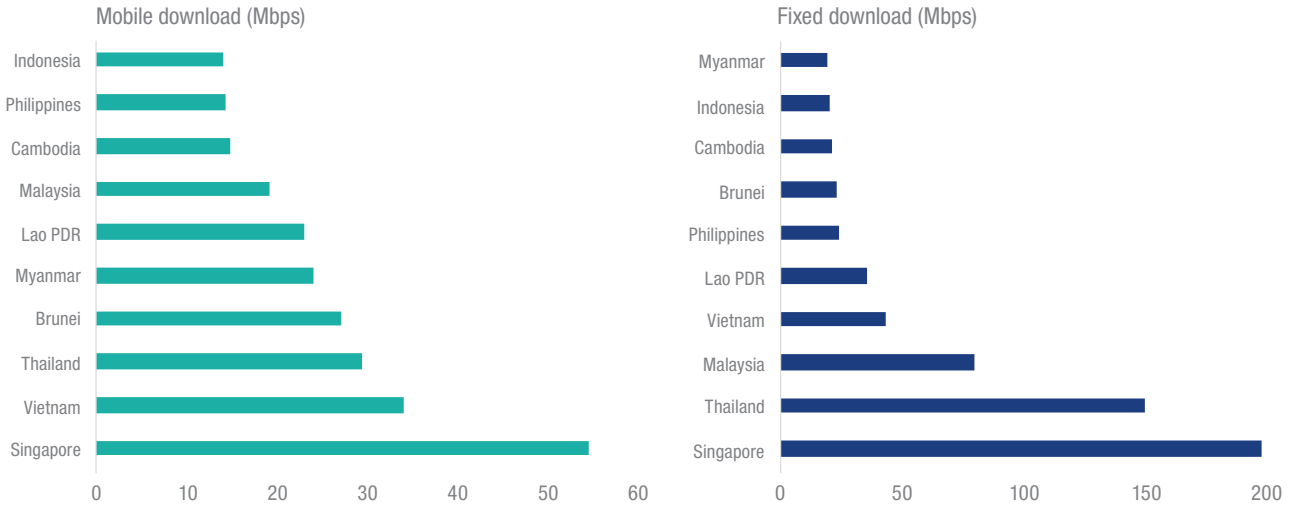


Sources: ITU (2018), Telegeography (2020).
Note: Mobile broadband means access to internet using a 3G or (faster) 4G enabled device. A GSM 2G connection means that the user only has basic data service that is, text messa ging. Fixed broadband means access to internet using fixed line networks such

Limited infrastructure and weak competition lead to poor quality and high cost. The quality of Internet service is an important factor to participate and thrive in the digital economy. Although, like internet penetration, internet download speed in the country continues to improve, it remains among the slowest in the region according to various sources (Figure 2.15). Prices have declined, but entry-level fixed broadband (postpaid, 1GB) service is equivalent to 6.5 percent of the country's gross national income (GNI) per capita[27] per month. This cost is above the 2 percent affordability threshold recommended by the UN Broadband Commission and the Alliance for Affordable Internet.[28] Mobile (postpaid, 1GB) broadband service is more affordable, but still higher than the ASEAN average. In 2017, the cost of a 1-GB mobile broadband stood at 1.94 percent of GNI per capita, against Vietnam's 2.94 percent and Indonesia's 1.39 percent (Figure 2.16 and Figure 2.17).

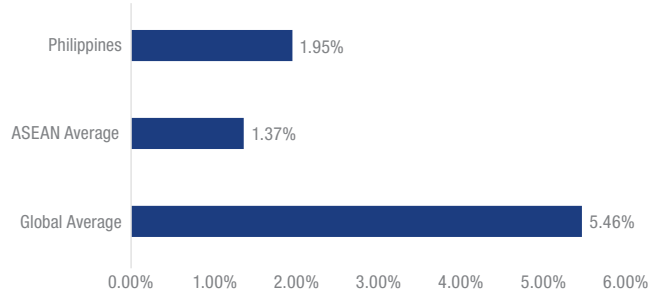
25 DepEd Order No. 13, s. 2016 provides for the inclusion of the budget for communications (telephone and internet connectivity) in a school's maintenance and other operating expenses (MOOE). According to a DepEd official, each public school is allocated P4,000/month for Internet connectivity (DepEd, 2016).
26 This includes alternative sources, such as solar power, generator sets, etc.
27 The Philippines per capita GNI was recorded at PHP 25,396 in Q1 2019 in constant pesos.
28 In 2018, the ITU's Broadband Commission adopted the A4AI's target of "1 for 2"—1GB of mobile broadband available for 2 percent of less of GNI per capita (A4AI, 2018).

Figure 2.15. Mobile and Fixed Internet Download Speeds (August 2019)



Source: Ookla (2019)

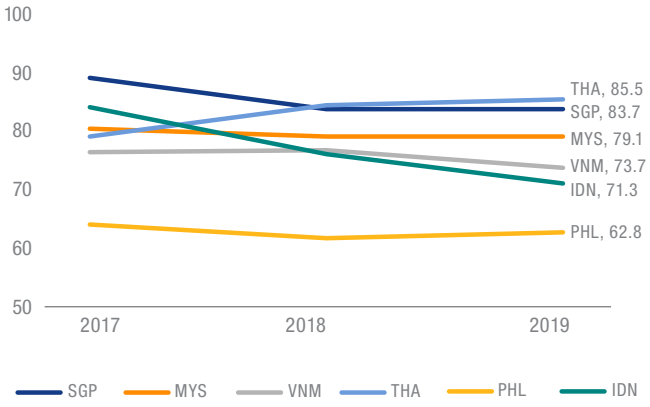
Figure 2.16. Price of mobile broadband (1GB, prepaid) as % of GNI per capita



Source: A4AI, 2017

Note: Methodology described in https://theinclusiveinternet.eiu.com/assets/external/downloads/3i-methodology.pdf

Figure 2.17. Economist Intelligence Unit (EIU) Affordability Score 2017-2019
Score of 0-100, higher scores represent more affordability



Source: EIU, 2019

Besides the disparity in digital access, the digital divide also arises from gaps in digital literacy and digital content. Digital literacy, covering basic ICT skills and internet know-how, among others, provides individuals the aptitude to access online services and use digital content to explore opportunities for personal and professional development. In the Philippines, a wide gap in digital literacy exists, caused by factors such as age, educational attainment and household income (Talandron et al., 2019). To partly address the problem, the authorities are incorporating ICT education in students' curriculum while initiating technology training programs for teachers. Yet, besides digital literacy, digital content has also been a hurdle for the wider and effective use of the internet. The problem of content arises due to the predominance of English as the language of choice for content online. Likewise, there is a growing trend by content providers to request subscription fees for access to online encyclopedias, dictionaries, journals, research reports and databases (Guadamuz, 2005).

Government initiatives to improve internet service and quality

The government has recently launched major initiatives to improve internet service and quality. Through the Department of Information and Communications Technology (DICT), the Government has been working on: (a) the National Broadband Plan (NBP), (b) free public Wi-Fi in public places, and (c) the selection of a new, third major telecommunications player. Other policies and regulations issued recently are summarized in Annex 1.

Under the NBP, the government aims to develop an alternative source of international bandwidth, submarine cable landing station, and domestic backbone network. This is intended to provide smaller market players a choice of bandwidth source other than PLDT and Globe. However, the optimal business model for such a network has yet to be determined. The NBP outlines three options for bringing Internet capacity down to the last mile: (a) the network and service provider to install infrastructure and provide internet services to end users, with the option for the government to share the cost; (b) the government to install infrastructure and the network while service providers lease the utilization of the lines and provide internet services to end users; and (c) the government to install infrastructure and provide direct internet services to end users. While the government may have the capital resources to fund the building of infrastructure, it does not have the expertise nor the flexibility necessary for building and operating a telecom or broadband network. Global best practice suggests that the government should play a role in addressing regulatory and legal issues supportive of a market-driven approach rather than direct investment and operation of networks.

As a related measure, to augment the still limited fiber optic network coverage in the country, the government is deploying its own fiber network to connect the major government agencies in Metro Manila. According to the DICT, it is using government assets, such as the metro rail transit (MRT) system, that can provide infrastructure and right of way at lower cost. Apart from providing internet service for the government, the DICT believes that this initiative will augment the still limited fiber optic network deployed by private telcos nationwide. This could potentially be implemented through availability and cost oriented pricing for dark fiber, a model currently being considered by the government of Mexico City, for example. In May 2019, the DICT signed an agreement with the Philippine Fiber Optic Cable Network Ltd., Inc. (PFOCN) which will reportedly invest between US$1 billion and US$2 billion to establish a shared network infostructure between 2019 and 2028. According to the DICT (2016), the PFOCN rollout will also become part of the Free Public Wi-Fi Network. The PFOCN will reportedly give preferential rates to the government while the rest of its capacity will be leased to telcos, ISPs, and cable TV operators. Depending on the final business model, the shared network model could potentially lower the cost of fiber offerings.[29]

The Free Public Wi-Fi program is intended to provide internet service to low-income locations, but implementation has been slow. The Free Internet Access in Public Places Act of 2017 aims to provide internet access in over 100,000 public sites nationwide by 2022 (from the previous target of 20,000) to extend internet to the low-income municipalities, lower the cost for end users, and improve internet quality of service by offloading mobile traffic in the free Wi-Fi sites. Despite the huge budget allocated for the program, only 3,283 free Wi-Fi sites or 3 percent of the total target has been put up since 2015 (Free Public Wifi Office, 2020). Challenges include developing an exit strategy sustainable business model for this program. For instance, a sunset provision could determine when government funding for free public Wi-Fi is no longer needed in certain areas, when the private sector is already willing to come in. This should be feasible since Republic Act (RA) 10929 allows ISPs enrolled under the program to sell excess capacity for a fee.

29 ICT company and cellular mobile telephone system (CMTS) licensee, NOW Corporation, signed a memorandum of understanding with PFOCN for the former's nationwide expansion.

To complement these two government programs, a new major telecommunication player was selected in 2019, but its defined service obligations are not at par with the requirements for the two incumbent telcos. In 2019, the government awarded a license to Dito Telecom, through a special selection process in response to a Presidential Directive. Unlike the incumbent telcos, the new entrant is expected to comply with defined service obligations, including a minimum population coverage and broadband download speed after 5 years of operation. Not only do these requirements make it for difficult for the new telco to provide competitive prices, but failure to deliver will result in a loss in its performance bond worth PHP 25.7 billion. Network planning had started as of early 2020, but the timing for the third telco's network rollout is currently uncertain as well as its impact on the competitive landscape. *A fair and level playing field for operators would require the government to apply the same service obligations and performance standards for the third telco to the incumbent telcos.*

Legal and Regulatory Challenges

Beyond these initiatives there are four key challenges that need to be addressed to improve the availability, quality, and affordability of internet services: (a) restrictions on investment and competition; (b) complex permit regulations; (c) infrastructure sharing for deployment of mobile and fixed networks; and (d) more efficient and effective radio spectrum management. This section also briefly considers the issue of satellite services for very remote regions.

(a) Restrictions on investment and competition

Public utility designation limits foreign investment. The Public Service Act of 1936 (Commonwealth Act 146) provides a high-level framework for classifying telecommunications or 'wired and wireless communications' as a 'public utility'. A public utility is subject to certain regulations, such as restrictions on foreign ownership and a cap on the rate of returns. The law does not distinguish between a 'public service' and 'public utility' so these two terms are often used interchangeably. It does not provide a definition of 'public services' but enumerates businesses—such as ice plants and ice-refrigeration plants along with freight or carrier services, electricity, gas, power, and wired or wireless communication systems—as public services. Under this definition, telecommunications/internet is considered a public utility, and thus subject to a 40 percent foreign ownership ceiling. The legislation is in process of revision, however. The recent Congressional approval of House Bill No. 78, on March 10, 2020 distinguishes telecommunication systems as a public service, no longer as a public utility. A public service was defined as those which are "non-rivalrous or imbued with public interest." It likewise allows for 100 percent foreign ownership of public services. Hence, this amendment will allow for more players to enter and usher in competition.

The requirement for a Congressional franchise is a significant barrier to entry. The Public Telecommunications Policy Act of 1995 (RA 7925) requires an entity wishing to build a 'network' to have a license as a public telecommunications entity (PTE). To become a PTE, the following needs to be secured: (a) franchise from Congress; (b) provisional authority (PA) valid for 3 years validity from the NTC; and (c) a certificate of public convenience and necessity (CPCN) which will be co-terminous with the Congressional franchise also from the NTC, usually valid for 25 years. The approval of CPCN undergoes a quasi-judicial process in accordance with the provisions of the Public Service Act of 2926 (CA 146). A legislative franchise can only be granted to entities that are at least 60-percent Filipino-owned, as articulated in Art. XII Sec. 11 of the 1987 Philippine Constitution.

Inefficient spectrum allocation limits market competition. The Radio Control Law of 1931 (Act 3846 and its amendment RA 584), which governs radio spectrum management, requires a Congressional franchise to secure

a permit to "construct, install, establish, or operate a radio station,"[30] which includes even the testing of radio equipment for a new and emerging technology, according to the NTC (Mirandilla-Santos, et al. 2018). The Radio Control Law also limits the use of radio spectrum (used for transmission of data, that is, for internet services) to enfranchised telcos only (that is, only to providers that offer voice telephony services as well as internet). This is a further barrier to entry as it effectively requires potential participants to make telephony investments while that industry slowly becomes obsolete. As demand for internet increases and as different types of Internet technologies have emerged (for example, use of internet for phone calls for example, Skype, WhatsApp, Viber, and so on), the policy governing the management of spectrum should evolve and adapt as well. An updated approach would be to allow ISPs that do not provide traditional voice telephony to have regional—rather than nationwide—spectrum assignments, and to consider dynamic spectrum use. This will allow more participants to enter the market and improve competition. This will also be particularly helpful for communities that traditional telecommunications networks do not reach.[31] Identifying and expanding unlicensed spectrum opportunities are also critical and will receive a big push with 6 Ghz band licensing.

Table 2.2. Licensing of ISPs Across Select Asia Pacific Countries

Country	Licensing
Cambodia	License from Telecommunication Regulator of Cambodia
Indonesia	License from Indonesian Telecommunications Regulatory Authority
Malaysia	License from Malaysian Communications and Multimedia Commission
Philippines	Telco franchise law passed by Congress;
	PA/CPCN issued by National Telecommunications Commission
Thailand	License from National Broadcasting and Telecommunications Commission
Singapore	License from Infocomm Media Development Authority
South Korea	Registration with Korea Communications Commission
Japan	Registration with Ministry of Internal Affairs and Communications (MIAC) (If installing cable facilities); Notification to MIAC prior to providing telecoms services, including Internet

Source: Better Broadband Alliance, 2019.

Lack of open access to the different parts of the broadband infrastructure also limit market competition. The Open Access in Data Transmission bill identifies the various segments in the broadband infrastructure and proposes to open them up to more and different types of players. This is a means to level the playing field and ensure that market players compete based on services and innovation, not on their capacity to secure costly licenses. The Philippines is the only country in the ASEAN region that still requires a franchise from Congress as the first step to obtaining a license to build and operate a network. Competitive global best practice points to administrative licensing by either the industry regulator or ministry of ICT (Table 2.2). In the 17th Congress, a bill proposing an open access framework in data transmission was approved in the House of Representatives but failed to move forward in the Senate. This was a major setback for broadband development in the country, especially since many of the proposals in the NBP is anchored on an open access policy. The bills were refiled by both houses in the 18th Congress, but are both pending committee approval, to date.

30 Under the law, a 'radio station' is interpreted to mean a facility that uses radio equipment for wireless data transmission.
31 In some countries, regulators have adopted innovative licensing, such as a 'social purpose' license, and exclusive service license granted in rural unserved or underserved areas to non-traditional network operators, including community networks (Internet Society, 2017). Examples include India, Mexico, and Brazil.

Current laws make it difficult for existing cable TV to provide broadband services. The operation of Cable TV operators, governed by EO 436, is regulated by NTC through the awarding of a PA or Certificate of Authority. As such, cable TV (CATV) operation is reserved for Filipino-owned entities. These licenses, which also go through a quasi-judicial process, are given per municipality and only by the NTC central office in Manila. This requirement can be lengthy and costly for a provider who wishes to operate a network across municipalities. While CATV operators are not allowed to offer telecommunications services, they can offer broadband services by sub-leasing any excess capacity of its cable TV system to a third party. However, under RA 7925, cable operators who wish to build any network segment outside their service area will need to secure a franchise from Congress and a PA for each municipality the network will pass through. In addition, private companies who wish to offer retail broadband service at the last mile are subjected to the Retail Trade Liberalization Act of 2000 (RA 8762). For foreign companies, a capitalization of at least US$2.5 million is required.[32]

The reform or repeal of various legislative barriers is a prerequisite to a more open and competitive broadband market in the Philippines. In sum, there is a need to amend the Radio Control Law, the Public Service Act, and the Public Telecommunications Policy Act, and to pass the Open Access in Data Transmission bill to lower barriers to entry and allow a more diverse set of providers to enter and operate in the market. Specifically, the policy change should remove the requirement for a Congressional franchise and PA/CPCN and consider a simple administrative registration and qualification process for the entry broadband network operators and for the assignment of radio spectrum.

(b) Permits and licenses

A proliferation of permits and licenses slow down the rollout of broadband networks. The deployment of broadband networks in the urban and rural areas depends not only on the availability of facilities from the major PTEs or telcos, but on a whole gamut of licenses, permits, and other bureaucratic requirements. Under Section 2 of RA 3846, a mobile network provider needs to secure a permit for the installation of a radio station, a permit to import equipment, and a radio station license. These requirements determine the radio equipment, location, and frequencies to be used for the network. While the awarding process is administrative in nature, the process can sometimes take time, and without guidance for an expeditious awarding process, can cause delay or even halt network rollout.

Various network deployment permits and fees are required by different authorities. These are imposed by several national government agencies (NGAs), local government units (LGUs), and private property management, such as building administrators and homeowners' associations. Some of these bureaucratic requirements, arbitrary fees and permits can be considered as 'institutionalized barriers to competition' and prevents the timely and cost-effective expansion of infrastructure in the last mile. According to a Globe webpage, the approval process can take up to 8 months (Table 2.3). Service providers have identified an average requirement of 25 permits, depending on the cell site's location and other impositions by the approving entity.

Aside from the general need to streamline processes in securing permits and licenses among relevant agencies, LGUs, or associations because this acts as a barrier to entry, there is a need to look into the issue of exclusivity, particularly between ISPs and certain residences or homeowners' associations. The PCC has recently filed a competition case against a condominium corporation in this regard.[33]

A recently issued joint memorandum circular aims to reduce the requirements and processing time for securing permits

32 Below this capitalization, an entity who wishes to engage and invest in retail trade needs to be whole owned by Filipino citizens.
33 https://phcc.gov.ph/press-releases/pcc-urbandeca-8990-holdings-abuseodominance-sett-case/

for common towers to half a month. In July 2020, the administration issued a joint memorandum circular entitled "Streamlined Guidelines for the Issuance of Permits, Licenses, and Certificates for the Construction of Shared Passive Telecommunications Tower Infrastructures". The joint circular aims to reduce the multiple permitting requirements for the construction of said shared tower infrastructures that will be constructed by Mobile Network Operators and Independent Tower Companies registered with the DICT. The inter-agency initiative is expected to result in streamlining the processing time for securing permits for common towers to 16 days.

Table 2.3. Reasons for the 8-month Long Process to Construct a Cell Site in the Philippines

Requirement	Permit and Clearance	No. of Permits	Length of Time
Right of Way	Negotiations and documentation of prospective cell site location	8	1-2 months
Social Acceptability	Barangay resolution, Homeowners Association consent, and residents' conformity	5	1-2 months
Various LGU permits	Zoning clearance from HLURB city or municipal resolution, occupancy permit, mayor's permit	8	2 months
National permits	DENR, LLDA, CAB, DOH, PCSD, BFAR, NCP	8	1-2 months
Structural permits	Zoning permits, locational clearance, building permit inclusive of electrical permit, sanitation permit and mechanical permit, occupancy permit	8	3-5 months
Construction starts			

Source: Icogo (2016); ABS-CBN News (2018)

(c) Lack of infrastructure sharing policies

The absence of a tower-sharing policy for mobile networks keeps entry costs high. A new firm would have to finance huge amounts of capital expenditure to build and maintain its own network infrastructure or suffer discriminatory charges to use their competitors' network. In contrast, under infrastructure sharing arrangements for mobile networks in other markets, operators typically agree to share facilities ranging from passive infrastructure (for example, site locations, masts, cabinets), to radio access networks (RAN) (for example, base station equipment, operation and maintenance), to active infrastructure (for example, radio spectrum, core network) (ITU, 2008). Cell site deployment can consume up to 50 percent of a mobile carriers' capital expenditure and up to 60 percent of its operating expenses. Given the massive amount of capital resources needed to promote broadband deployment expansion,[34] infrastructure sharing policies for mobile networks is becoming global best practice.[35]

The government developed and recently passed a common tower policy. In mid-2018, the government announced a plan to issue a common tower policy to accelerate the buildout of telecommunications towers and achieve its target of 50,000 by 2022. In May 2019, the DICT issued Rules on the Accelerated Roll-out of Common Towers,[36] which also identified 2,500 government sites that can be used for tower installation. In May 2020, the DICT issued department circular no. 8 on the co-location and sharing of passive telecommunications tower. To date, 24 tower companies have each signed memorandum of understanding with the DICT to express their intent to enter the tower market. The policy would facilitate faster rollout of the third telco, and address the following issues:

- Foreign ownership restrictions on independent tower companies (ITCs)
- Limitation on the number of ITCs allowed to enter the market
- Mode of engagement of ITCs
- Independence of tower companies from mobile network operators
- Financial and technical qualifications on ITCs

34 Former DICT undersecretary Eliseo Rio, Jr. announced that the Philippines needs 50,000 cellular towers to cope with the demand and quality standards of good mobile services.
35 Towers and base stations also require users to be within 0.5 to 2km radius (Mirandilla-Santos, 2016). This will become more crucial with the introduction of 5G technology.
36 The DICT issuance includes a list of DICT towers and real estate that can be used for the tower buildout, a list of about 1,000 'hard to acquire sites' (according to PLDT and Globe) where government assistance in securing permits is most needed, and GovNet sites (DICT, 2019).

Poor coordination with the Department of Public Works and Highways (DPWH) leads to slower deployment and higher costs for both service providers and the government. Civil works (that is, the excavation and restoration of roads) is said to take up as much as 80 percent of the cost of deployment of fixed broadband networks.[37] There are no common or shared utility corridors that will allow various operators to use conduits to lay fiber in existing roadworks, nor a 'dig once' policy that requires coordination for one-time civil works.[38] Ideally, broadband infrastructure installation is done at the same time as the building of new roads or road digging to minimize the amount of disruption to the people and the public space.[39] With coordination, the cost for both the service providers and the government will also be minimized since the road digging and reinstallation will be done only once. Synchronizing the schedules of project implementation is critically important, as a national road project cannot wait for the deployment schedule of broadband operators.[40]

New regulation on pole attachment can help reduce fiber deployment costs. Pole attachment is very important for cable broadband operators and aerial fiber deployment. Poles are often owned and operated by electricity distributors (for example, Meralco and the electric cooperatives in the provinces) and are within the jurisdiction of electric power industry regulators (for example, Energy Regulatory Commission (ERC) and the National Electrification Authority (NEA)). Currently, there is no regulation on pole attachment for non-electric access seekers, such as telecom and broadband operators. In August 2018, the DICT, NEA and the Philippine Rural Electric Cooperatives Association, Inc. (PHILRECA) signed a memorandum of understanding for the implementation of the National Broadband Plan, particularly on the co-use of fiber optic cables (NEA, 2019). However, the rising cost of pole attachment (from PHP100 to 400 per pole, per attachment, per year) has been challenging.[41]

The two dominant incumbent players own and control the country's broadband infrastructure. The operation of any broadband network in the country, including the government's, is dependent on access to the infrastructure of PLDT and Globe. Any new player, unless it plans to build and operate its own network or is given access to some of the government's assets (for example, existing roads, railways, towers, fiber optic network and/or planned cable landing stations, NGCP's fiber optic network) will have to bilaterally negotiate interconnection and access to the incumbent telcos' facilities from the cable landing stations, backbone, middle mile, and access networks. This puts any new player at risk of non-competitive behavior (for example, discriminatory charging) from the two incumbents.

For this reason, open, non-discriminatory open access to broadband infrastructure is extremely important. Instead of a single, vertically integrated network, an 'open access' approach is recommended. This promotes infrastructure sharing among service providers and access to network segments on fair, reasonable and non-discriminatory (FRAND) terms. Infrastructure sharing is a way to optimize the use of resources by allowing two or more service providers to use the same structure or network element. With the end goal of increasing broadband connectivity, infrastructure sharing promises to reduce costs of deployment, lower asset duplication, reduce environmental impact, lower barriers to entry and increase competition, expand network coverage, and lower service prices (Deloitte, 2015).

In the absence of a law, the DICT should consider issuing its own policy on infrastructure sharing. Using an open access approach, DICT may allow the use of government assets, such as the 2Tbps cable capacity from PLCN, the landing

37 According to MetroWorks ICT Construction that carries out civil works for telecom and ICT operators.
38 Instead, the operator needs to submit a detailed plan for the civil works and get approval from the regional or district offices.
39 Interview with DPWH Central Office officials and staff for policy and design, and bureau of planning, 2019.
40 Interview with DPWH Central Office officials and staff for policy and design, and bureau of planning, 2019.
41 See Memorandum No. 2018-55 to Electric Cooperatives on Standard Joint Pole Agreement and Pole Rental Rate, https://nea.gov.ph/index.php?option=com_phocadownload&view=category&download=3256:memo-to-ecs-2018-055-standard-joint-pole-agreement-and-pole-rental-rate&id=203:2018&Itemid=264

stations built by the Bases Conversion and Development Authority (BCDA), and the NGCP fiber optic network, by private service providers. In doing so, the government should balance between maximizing the use of assets, and even monetize them, while providing an alternative source of bandwidth for new and small players in the countryside. Infrastructure sharing can adopt any of the following business models (World Bank, 2017b):

- Joint development: infrastructure owners and telcos (for example, network operators) coordinate in planning and construction
- Hosting: infrastructure owner hosts third party telco network equipment
- Dark fiber: host provides passive infrastructure for lease to network operator
- Joint venture: infrastructure owner provides network owner with use of existing infrastructure to provide commercial service on profit-sharing basis
- Wholesale telecom service: infrastructure owner provides commercial wholesale service to network operators

The scope of an infrastructure sharing policy should, ideally, be cross-sectoral to include networked infrastructure such as roads, railways, electricity transmission. The policy must include standards, regulation on access and pricing, and a coordinating body to look into how different utilities, government agencies, and regulators can work together. The policy should also include provisions for coordinated planning and construction among various government agencies and private service providers. The timing is appropriate as the current administration implements its 'Build, Build, Build' program and a number of roads, bridges, and train projects are underway. Finally, in a setting where open access to a private operator's property is involved, the policy must provide a mechanism for when and how government can intervene in cases where there are: (a) failures in access seeker and infrastructure owner to reach an agreement within the prescribed time period of negotiation, (b) disputes in the terms and conditions for accessing infrastructure, and (c) pricing disputes.

(d) Spectrum management for mobile broadband

Current laws that regulate spectrum use and allocation are outdated. The way the government manages its radio spectrum resources is crucial to ensuring mobile broadband coverage and quality of service, as well as in promoting competition in the mobile service market. However, the laws that govern radio spectrum in the Philippines are designed for legacy (analog) technology and merely provide a general framework for the regulator to interpret into regulation.

Radio spectrum has never been competitively bid out in the Philippines. The NTC has never carried out an open tender for spectrum because the supply has reportedly always exceeded the demand for spectrum. To date, all frequencies have been awarded through a simple administrative process[42] akin to a 'beauty contest',[43] where the applicants that best show financial and technical capacity to provide the required capitalization and infrastructure are granted the spectrum license, regardless of the applicant's current spectrum holdings or the validity of the justification for the additional spectrum.[44] Given these criteria, the process is likely to favor incumbents and large telcos, and leave a slim chance for spectrum to be awarded to a new entrant. Moreover, the administrative method of assigning frequency has produced "inefficiencies and underutilization of spectrum bandwidth, not to mention limiting the flexibility in service provision and impeding technological developments." [45]

42 The process often involves the submission by an applicant of a letter of request to the regulator for its spectrum needs. This is unlike in other countries, where there are public consultation documents, market reviews, and spectrum management plans issued by the regulator before spectrum is assigned or awarded to an entity.

43 On August 23, 2005, the NTC issued Memorandum Circular No. 07-08-2005 or the Rules and Regulations on the Allocation and Assignment of 3G Radio Frequency Bands, allocating the 825-845MHz/870-890MHz frequency bands for 3G. The NTC issued 3G spectrum to four mobile operators, namely Smart, Globe, Digitel and CURE. Bayantel was disqualified but won a petition in the Court of Appeals, who, in December 2010, ordered the NTC to stop the bidding for the last remaining 3G frequencies. The case has been pending in the Supreme Court since April 2010. https://www.philstar.com/business/2010/04/11/564944/ntc-elevates-3g-award-row-bayan-supreme-court.

44 PCC. Note on Spectrum Management. Also, see https://businessmirror.com.ph/2018/04/11/phl-internet-speed-hinges-on-equitable-spectrum-allocation-and-management/.

45 Gilbert Llanto, Policy Note on Reviewing the Philippines' spectrum management policy, 2006; PCC's Policy Note on Spectrum Management, 2018.

The scarcity of the remaining unassigned spectrum bands will limit the competitiveness of any new incoming player. In 2017, upon the directive of the DICT, the NTC published the result of an audit of "assigned, returned and vacant mobile access frequencies," which showed that spectrum in key bands, such as 900 MHz and 1800 MHz, have been assigned to only two players. A recent Senate report noted that the remaining frequencies for the third player "will be limited to data-driven services" [46] in a country where at least 40 percent of mobile phone users are still dependent on basic call and text services. As spectrum hoarding has become a barrier to competition, the policy will need to clarify the powers and functions of the NTC in spectrum assignment, recall, reassignment, as these are absent in existing laws. The policy should define the guidelines for how and when NTC initiates proceedings for recall and reassignment of spectrum, as necessary to assure the availability of spectrum for multiple operators. In the current scenario the third telco will face higher costs associated with the limited amount of spectrum that it has been allocated (less spectrum requires construction of more infrastructure to offer the same level of service as a telco that has more spectrum).

The process of spectrum management could be more transparent and dynamic. Spectrum assignments in the Philippines are considered confidential and the awarding of spectrum an internal process. Moving forward, the publication of all applications, approvals and decisions for test permit, demonstration permit, assignment, re-assignment, or co-use of spectrum would be advisable. This also includes public consultations before any issuance of approval can be made by the NTC. Part of enhancing transparency is defining the period for a spectrum assignment review and publishing the results of such review. Furthermore, the NTC, in coordination with DICT and the Philippine Competition Commission (PCC), and in accordance with global best practice, can issue rules and regulations governing shared spectrum use. The NTC and DICT can explore the adoption of emerging spectrum management practices, such as dynamic spectrum allocation.

(e) Addressing connectivity needs for very remote areas

The government needs to develop a clear strategy on how to deploy better broadband services to far-flung areas. A small number of regions in the Philippines are unable to be readily connected through terrestrial (fixed and mobile) networks due to geographic constraints. These areas will have to continue to rely on satellite services. Despite this, there is very little information about the government's plans on how to facilitate access to satellites for broadband connectivity, other than that satellite technology will be used to address the requirement of isolated locations (that is, mountains, coastal and small islands) where the deployment of fiber network facilities will be challenging. However, there seems to be increasing adoption of satellite technology through the Free Public Wi-Fi program. Satellite is also being used to connect Free Public Wi-Fi sites in unserved areas in Marinduque and hard-to-reach areas in Bohol, Davao, and Sorsogon. An option to consider for the medium term may be the deployment of more advanced HTS – high through-put satellites are also making a significant impact on cellular backhaul though 200-500Mbps to the tower (a near substitute for fiberizing towers) for both community WiFi and 4G mobile services.

Open access to satellites can boost the rollout of satellite-based broadband services. The Government could consider replacing EO 467 (s. 1998) to enable more equitable access to satellites and other emerging technologies that can offer innovative solutions for the rural and hard-to-reach communities. The tourism, banking, shipping, and mining industries are just some of the sectors that can benefit from open access to satellite broadband technology. A liberalized satellite market can also help connect the 34,000 or so public schools that remain offline due to the lack of Internet facilities in their communities (DepEd, 2016).

46 Senate Committee Report No. 78, May 16, 2017.

Conclusions and Recommendations

The COVID-19 pandemic calls for urgent action to improve digital infrastructure and connectivity in the country. Recommendations in the immediate term include the speedier rollout of mobile network infrastructure which can be implemented through the DICT issuance of common infrastructure policies. Because legislative options normally take time, authorities can consider executive issuances including, for instance, on spectrum management and competition for frequencies. To deliver quick access for public servants, the government can coordinate and fast track the procurement of internet services for government offices and critical facilities (for example, health centers, hospitals).

Drawing in greater private sector participation will help improve broadband connectivity and unleash the Philippines' huge potential to thrive in the digital age and for Filipinos to be active participants in the digital economy. Investment in the Philippines' digital infrastructure should continue to be led by the private sector. Still, the government plays an important role in creating an enabling policy and regulatory framework to enhance access to, and affordability of, internet services throughout the country, and in ensuring a more competitive market. This can be achieved through a combination of the following short- and medium-term measures:

Lower barriers to market entry by easing the restrictions to foreign ownership of equity in telecommunications and broadband networks. This can be accomplished by amending the Public Service Act and the Public Telecommunications Policy Act, and by passing the Open Access in Data Transmission bill.

Streamline permit requirements for network deployment and rationalize fees imposed by various national and local government agencies, as well as private sector associations.

Establish a fair and level playing field for operators that requires the government to apply the same service obligations and performance standards for the third telco to the incumbent telcos.

Fast-track and lower the cost of deploying broadband infrastructure through infrastructure sharing policies that address: (a) the use of government assets (submarine cable, NGCP dark fiber); (b) the use of existing infrastructure across sectors such as roads, railways, electricity transmission; and (c) coordinated build for a shared utility corridor.

Encourage more private sector infrastructure sharing. This policy can be approved under existing bills, such as the proposed Open Access in Data Transmission Act or can be proposed as separate DICT policies to promote common towers, pole sharing, and access to ducts. However, an executive order mandating infrastructure sharing across these passive infrastructure modalities would have a more immediate impact.

Make more spectrum available for Internet connectivity. About 95 percent of Filipinos access the Internet through mobile and wireless devices. Spectrum management reform would entail amending the Radio Control Law and/or the Public Telecoms Policy Act, and passing the Open Access in Data Transmission bill, including the guidelines that will clarify the powers and functions of the NTC in terms of spectrum assignment, recall, and reassignment.

Finally, the government is recommended to focus its efforts on addressing these regulatory and legal issues supportive of a market-driven approach. Government should refrain from directly owning and operating network infrastructure as these are not its comparative advantage, and also against global best practice. Ultimately, the government's role should be as a policymaker and regulator.

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Annex 1. DICT and NTC Policy and Regulatory Issuances Affecting Broadband Access, Quality and Affordability (2016-present)

Topic	DICT Issuance	Policy	NTC Issuance	Regulation
Share Infrastructure	May 2019	Rules on the Accelerated Roll-Out of Common Towers in the Philippines[47]		
	DICT-DC-008-2020	Policy Guidelines on the Co-Location and Sharing of Passive Telecommunications Tower Infrastructure for Macro Cell Sites		
Mobile Number Portability			NTC MC No. 03-06-2019	Rules and Regulations Implementing Republic Act No. 11202 Otherwise Known as the "Mobile Number Portability Act"[48]
Mobile Device Unlocking	DICT-MO-004-2018	Mandatory Unlocking of Mobile Phones and Devices After Lock-In Period and Compliance with Terms and Conditions Contained in Subscription Agreements[49]	NTC MC No. 01-05-2019	Rules and Regulations on Unlocking of Mobile Phones and Devices[50]
Third Telco	DICT-MO-001-2018	Policy Guidelines for The Entry of a New Major Player in The Public Telecommunications Market[51]	NTC MC No. 09-09-2018	Rules and Regulations on the Selection Process for a New Major Player in the Philippine Telecommunications Market[52]
			NTC MC No. 12-03-2018	Document Verification Report on the Requirements Submitted by the Provisional New Major Player[53]

(Box continues next page)

47 https://dict.gov.ph/wp-content/uploads/2019/05/Final-Version-Rules-on-the-Accelerated-Roll-Out-of-Common-Towers-in-the-Philippines.pdf
48 http://ntc.gov.ph/wp-content/uploads/2019/07/MC-03-06-2019.pdf
49 https://dict.gov.ph/wp-content/uploads/2018/12/Memorandum-Order-No.-004.pdf
50 http://ntc.gov.ph/wp-content/uploads/2019/MC/MC-01-05-2019.pdf
51 http://dict.gov.ph/wp-content/uploads/2017/01/DICT-MO-001-2018-POLICY-GUIDELINES-FOR-THE-ENTRY-OF-A-NEW-MAJOR-PLAYER-IN-THE-PUBLIC-TELECOMMUNICATIONS-MARKET.pdf; See latest amendments http://dict.gov.ph/wp-content/uploads/2018/09/MEMORADUM-NO.-003.pdf
52 http://ntc.gov.ph/wp-content/uploads/2018/MC/MC-09-09-2018.pdf
53 http://ntc.gov.ph/wp-content/uploads/2018/MC/NMP_TWG_Document_Verification_Report_20181112.pdf

Topic	DICT Issuance	Policy	NTC Issuance	Regulation
Free Internet Access in Public Places	June 2018	Rules and Regulations to Implement the Provisions of Republic Act No. 10929 (Free Internet Access in Public Places Act)[54]		
Radio Spectrum	DICT-DO-004-2018	Directing the National Telecommunication Commission (NTC) to Review and Make Appropriate Adjustments to Increase Spectrum User Fees (SUF)[55]	NTC MC 02-02-2018	Additional Frequency Allocations for Broadband Wireless Access (BWA)[56]
	DICT-DO-003-2018	Directing the National Tele-communications Commission (NTC) to Review and Make Appropriate Adjustment on The Spectrum User Fee (SUF) for the 610-790 MHz, 790-960 MHz,and ‘ 710-2025 MHz International Mobile Telecommunications (IMT) Frequency Bands[57]		
Interconnection Charges	DICT-DO-002-2018	Directing the National Telecommunications Commission to Reduce the Interconnection Rates betwee Public Telecommunications Operators[58]	NTC MC No. 05-07-2018	Interconnection Charge for Short Messaging Services and Voice Service[59]
			NTC MC No. 09-11-2016	Interconnection Charge for Voice Service[60]
Broadband Quality of Service			NTC M No. -12-2016	Rules on the Measurement of Mobile Broadband/ Internet Access Service[61]
			NTC MC No. 07-08-2015	NTC MC No. 07-08-2015 Rules on the Measurement of Fixed Broadband/ Internet Access Service[62]

54 https://dict.gov.ph/wp-content/uploads/2020/02/RA10929-Published_IRR_Free-Internet-Access-in-Public-Places-Act.pdf
55 http://dict.gov.ph/wp-content/uploads/2018/09/DICT-DO-004-2018-DIRECTING-THE-NATIONAL-TELECOMMUNICATION-COMMISSION-NTC-TO-REVIEW-AND-MAKE-APPROPRIATE-ADJUSTMENTS-TO-INCREASE-SPECTRUM-USER-FEES-SUF.pdf
56 http://ntc.gov.ph/wp-content/uploads/2018/MC/MC-02-02-2018.pdf
57 http://dict.gov.ph/wp-content/uploads/2018/06/imagetopdf.pdf
58 http://dict.gov.ph/wp-content/uploads/2018/05/DICT-DO-002-2018-DIRECTING-THE-NATIONAL-TELECOMMUNICATIONS-COMMISSION-TO-REDUCE-THE-INTERCONNECTION-RATES-BETWEEN-PUBLIC-TEECOMMUNICATIONS-OPERATORS..pdf
59 http://ntc.gov.ph/wp-content/uploads/2018/MC/MC-05-07-2018.pdf
60 http://ntc.gov.ph/wp-content/uploads/2016/MC/MC-No-09-11-2016.pdf
61 http://ntc.gov.ph/wp-content/uploads/2016/MC/MC-10-12-2016.pdf
62 http://ntc.gov.ph/wp-content/uploads/2016/MC/2015/MCNo.2015_0708.pdf

CHAPTER 3

PROMOTING DIGITAL PAYMENTS

Introduction

The COVID-19 pandemic has elevated the urgency of using digital payment services. During this period of social distancing, restricted mobility, and rising uncertainty, digital payment services have facilitated daily financial transactions, enabling users to send money to another person or a family member, pay bills, and receive wages while keeping them safe. Comparing 45 days before and after the implementation of the lockdown measure, ATM cash withdrawal and check clearing declined and transactions through automated clearing houses increased. The recent surge in the use of digital payments has indicated the growing acceptance of digital financial solutions in an economy that heavily relies on paper-based payment instruments such as cash and checks. However, not all Filipinos experience the same level of convenience and safety in transactions that digital payments allow. Majority of Filipinos, most especially the poor and unbanked, risk their health and safety as they continue to use cash in making payments, undermining social distancing measures. To regulate such risks and support the economy in recovering from the pandemic, the government and the private sector could accelerate their efforts in promoting digital financial adoption in the country.

In addition to keeping people safe when carrying out payment transactions, the use of digital payment services is key to increasing efficiency, promoting financial inclusion, and enabling the digital economy as the country transitions to the 'new normal'. Digital payment services increase efficiency by removing frictions in payment processes and reducing the cost of doing business. The transition from the use of cash and checks to digital payments significantly lowers the cost of payment, and accelerates payment processes for merchants and expand the transaction scale of digital payments which will bring in more digital payments through a network effect. Digital payments also promote financial inclusion, especially for the unbanked population. Mobile money schemes, for example, allow individuals who own a phone but do not have a bank account to save money and carry out transactions. The use of digital payments facilitates growth of the digital economy as businesses reach a wider set of customers while customers increase patronage of e-commerce due to greater convenience in payment. The use of digital payments also improves trust in technological solutions, leading to greater engagement in the digital economy.

Fortunately, in the last five years, the country's policy and regulatory framework has undergone major reforms, creating an enabling environment for greater adoption of basic digital financial services.
Recent reforms in the National Payments System of the Philippines include the National Payment Systems Act, the National Retail Payment System Framework, and initiatives such as the standardization of a QR code for payments and eGov Pay (digitizing payments to government agencies). The government has also passed key regulatory reforms that increase competition and innovation in the digital financial industry. The enactment of Republic Act No. 10641 in 2014, for instance, allowed full entry of foreign banks into the Philippines, increasing competition in the banking industry and stimulating knowledge transfer especially in areas such as financial technology innovation. Despite the implementation of these landmark reforms, the country's digital payment ecosystem still needs development to effectively increase the country's digital financial activity.

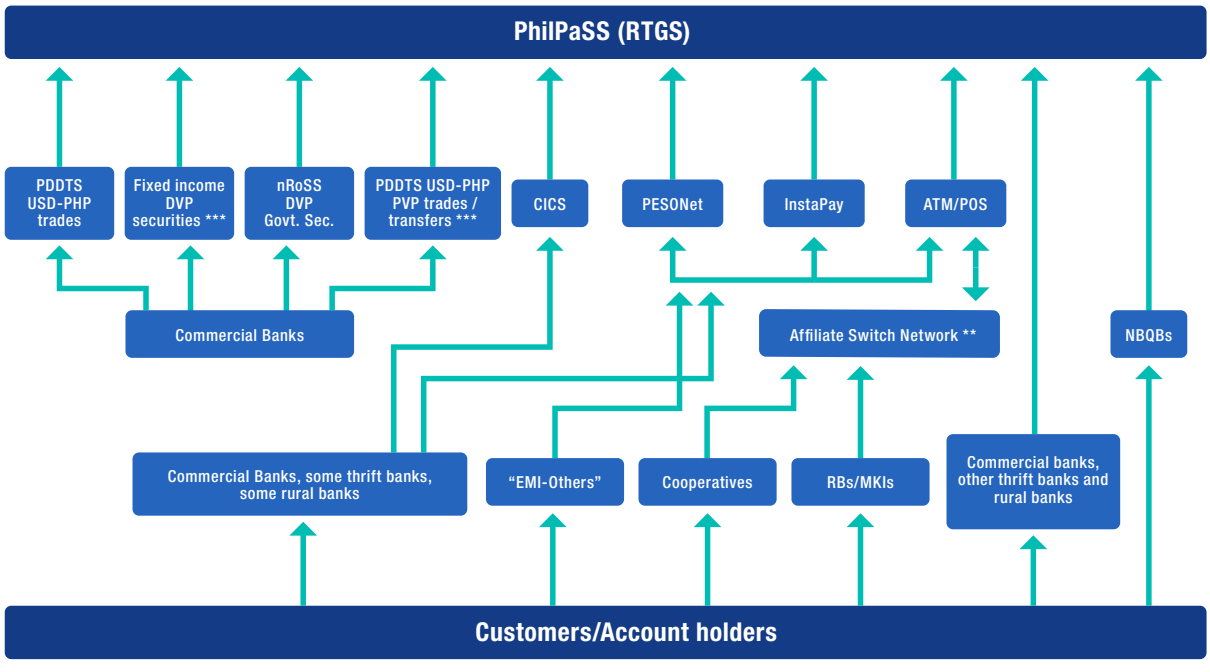
The development of digital payment ecosystems around the world has been very heterogenous. While different policy paths may result in creating the digital payments ecosystem, a number of critical enablers must be present for digital payments to emerge, gain acceptance, and flourish. They include appropriate legal and regulatory framework, robust financial and ICT infrastructure, and well-designed financial products. They can be strengthened by high financial literacy, good standards of consumer protection and digitalization of existing payment streams, particularly those with high volumes.

Making digital payments widely available and accepted depends on the availability of infrastructure - both general ICT infrastructure and payment systems in particular. Infrastructure that allows fast and reliable remote on boarding becomes invaluable—and this means that digitally-enabled national ID systems and conducive environment that facilitate the use of the ID is a critical enabling factor. Digital payments require interoperable payment systems allowing seamless fund transfers between accounts maintained by different institutions—switches, automated clearing houses, and supporting infrastructures. The current state of the payment systems ecosystem and digital financial infrastructure is discussed in detail in the succeeding sections.

Payment Systems Landscape in the Philippines

The Philippines' National Payments System (NPS) landscape continues to evolve, thanks to new legal and regulatory frameworks, payment system infrastructures, payment service providers and products (Figure 3.1). The NPS plays a key role in promoting financial stability and financial inclusion. The Bangko Sentral ng Pilipinas (BSP) has a mission to promote and maintain price stability, a strong financial system, and a safe and efficient payments and settlements system conducive to a sustainable and inclusive growth of the economy. The Philippines' NPS is anchored in its real-time gross settlement (RTGS) system, called PhilPaSS. It provides real-time settlement services in local currency (PHP) to banking institutions, private and public entities, and financial markets, and is considered a systemically important payments system (World Bank, forthcoming). BSP is currently upgrading the PhilPaSS to a new generation that will process payment instructions with ISO20022, a global standard for financial messaging being adopted by the payment industry worldwide.[63]

Figure 3.1. Philippines National Payments System Architecture



**Sponsored into settlement by banks.*
***On-us transactions...*
****PSSC*

Source: World Bank (forthcoming).

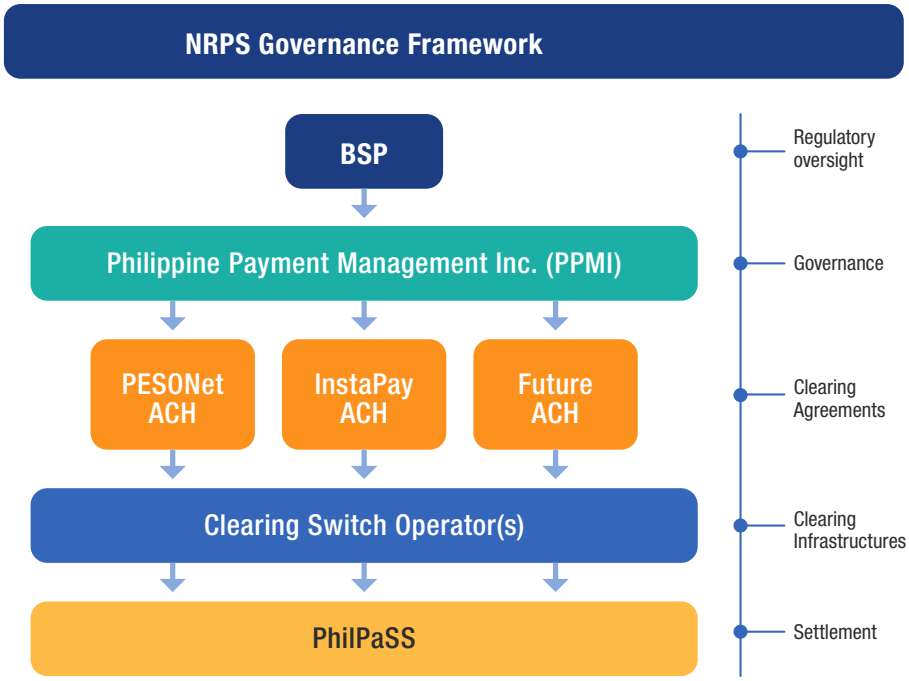
Legend:

PVP	- payment versus payment
EFTIS	- electronic funds transfers instruction system
PDDTS	- Philippine domestic dollar transfer system
AABs	- authorized agent banks
EMI	- electronic money issuer
MFIs	- microfinance institutions
CICS	- check imaging clearing system
NBQBs	- non-bank financial institutions with quasi-banking functions

63 Benefits of implementing ISO20022 messaging standards are 1) richer data: more information can be carried in each message, improving analytics and fraud detection, 2) reduced risk: the better structure of the message supports improved straight-through-processing, leading to better customer service and fewer delays, and 3) Flexibility: ISO 20022 messaging can be adapted more easily to changes in the wider payments environment, so will be more responsive to emerging technologies, promoting innovation in the financial sector (Bank of England, 2019).

The development of retail payment infrastructures and services is rapidly progressing. In 2017, BSP issued Circular No. 980 on the Adoption of the National Retail Payment System (NRPS) Framework. New governance arrangements under the NRPS Framework include BSP oversight over retail payment systems, the creation of an industry-led self-governing body (the "Payment System Management Body" or PSMB) and the separation of rule setting for the various retail payment clearing streams from the actual clearing operations (Figure 3.2). The clearing streams are referred to as 'automated clearing houses' or 'ACHs', while clearing operations are performed by 'clearing switch operators' or 'CSOs'. One 'ACH' can only be cleared/processed via one CSO, although one CSO may clear/process multiple 'ACHs'. Also, the BSP prioritized the formation of two 'ACHs', namely the batch electronic fund transfer (EFT) Credit or PESONet, and the real-time Low Value EFT Credit or InstaPay, given their perceived impact in driving the usage of electronic payments.

Figure 3.2. NRPS Governance Framework



Source: BSP. Available Online: http://www.bsp.gov.ph/payments/nrps_framework.asp.

PESONet and InstaPay are interbank retail payment systems already in operation in the Philippines. The two systems are operated by the private sector and are regulated and overseen by the BSP. Both PESONet and InstaPay can handle large volumes of payments. One important difference between the two is that in InstaPay, payments are processed and credited to beneficiary accounts in real-time, while in PESONet, the crediting of transactions is made on the same day, provided that the transfer is made on or before the cut-off time set by the sender's bank or EMI; otherwise, crediting will be made on the next banking day. A typical cut-off time set by banks falls between 12:00 and 15:00. PESONet appears to be better suited for payments like payroll and other corporate payments, social assistance payments such as a conditional cash transfer program bulk payments of individual low-value that can be processed in a planned manner, so that the funds reach the destination account on the planned date. Moreover, as per BSP Circular No. 980 of 2017, each beneficiary being paid through PESONet or InstaPay must receive the full value of the payment transaction in their account. Clearly, this is of utmost importance for social grant recipients. As of June 2020, there were a total of 58 direct participants in PESONet. In the first two quarters of 2020, the volume of PESONet transaction processed almost reached 12.0 million payment orders which was as high as the 2019 entire volume of approximately 12.1 million payment orders.[64]

64 http://www.bsp.gov.ph/payments/nrps_empowering.asp

Table 3.1. Comparison of fund transfer methods in the Philippines

Payment Type	Funds Availability	Maximum Transaction Limit	Mode	Service Availability	Charges Applied
InstaPay	Almost immediate	Max of PHP50,000	Electronic	24/7, all year round	Sender may bear charges; Receiver is not charged and gets full amount sent
PESONet	Same day*	No limit	Electronic	Banking hours only	Sender may bear charges; Receiver is not charged and gets full amount sent
Checks	Next Day	No Limit	Over-the-counter	Banking hours only	Charges may vary; Receiver gets full amount on check
Money Transfer Agent	Same Day	No Limit	Over-the-counter	Banking hours only	Sender may bear charges; Receiver may also bear charges

**The funds transferred via PESONet are available on the same banking day, provided the sender initiated the payment within the cut-off time set by his bank or EMI.*

Source: BSP, InstaPay Factsheet, Available Online: http://www.bsp.gov.ph/downloads/primers/InstaPayFactSheet.pdf.

While the Philippines payment systems have developed over the years, certain functionalities are missing to promote digital payments. Currently, no systems provide interoperable direct debit. Direct debit is a payment for the debiting of a payer's payment account whereby a payment transaction is initiated by the payee on the basis of authorization given by the payer (European Central Bank, 2010). Direct debit is often used recurring payments such as bill payments, and loan and mortgage repayments. The industry is currently considering developing direct debit under NRPS. Many banks provide auto-debit arrangement services to their own clients in order to facilitate payments such as paying for the credit card balance.

Stakeholders

The BSP is the country's central monetary authority and banking supervisory agency, and is a crucial player in the country's national payments system. BSP is the regulator and overseer of payment systems in the Philippines. It is also a payment system operator, being the owner and operator of PhilPaSS, a real-time gross settlement (RTGS) system, which is the core payments system of the country. As part of this last role, it also provides liquidity facilities to PhilPaSS participants. BSP has a payment system oversight department which is an overseer of the payment system including RTGS that is operated by the Payments and Settlement Office.

Banks and non-banks provide digital payment services in the Philippines. Banks are the main payment service providers in terms of total value and volume of payment transactions processed. Under the BSP charter, all banks and several types of NBFIs, including their subsidiaries and affiliates engaged in related activities, are supervised and regulated by BSP. Banks typically offer a wider range of electronic payment instruments – card payments (credit and debit), inter-bank payments and electronic money. BSP has licensed 31 banks as electronic money issuers (EMIs). Essential banking sector data are available in Table 3.2.

Table 3.2. Philippines: Essential banking sector data

Concept	Aug-19
Total number of banks	552
Universal	21
Privately owned	12
State owned	3
Branches of foreign banks	6
Commercial	25
Privately owned	5
Subsidiaries of foreign banks	2
Branches of foreign banks	18
Thrift banks	50
Of which, authorized to accept demand deposits	37
Rural and cooperative banks	456
Of which, authorized to accept demand deposits	149
Number of deposit accounts at universal/commercial banks *	48,162,126
Number of deposit accounts at thrift banks*	7,683, 597
Number of deposit accounts at rural/cooperative banks*	9,400,704

Note: *as of March 2019
Source: World Bank technical note based on BSP's website and various reports

Non-bank institutions offer a more limited range of payment instruments with innovative features such as e-money, linking to other digital services on an App. BSP-supervised EMIs include one non-bank financial institution (OmniPay) and 16 non-bank institutions (EMI-other) including FinTech companies (Figure 3.3). A few FinTech companies provide e-commerce companies with solutions such as a payment gateway, e-wallet/e-payment for an e-commerce site. Given the nature of FinTechs and innovative solutions, the landscape is constantly changing. As of July 2020, 103 operators of payment system registered with BSP.[65]

Figure 3.3. Philippine FinTech Startups Landscape (2018)

Source: Fintech News Singapore. Available Online: www.fintechnews.sg

Money service businesses (MSBs) are non-bank entities that engage in international and domestic remittances, money changing, and/or foreign exchange dealing. Within the concept of MSBs the following specific activities are considered, all of which require registration with the BSP:

a. Remittance and Transfer company (RTC) refers to any entity that provides money or value transfer service.

b. Remittance sub-agent (RSA) refers to any person authorized by the RTC to perform certain relevant undertakings in the remittance business.

c. Money changer/Foreign exchange dealer refers to any entity who engages in money changing/foreign exchange dealing business.

d. Remittance business refers to the transferring of funds or facilitating the movement of funds or monetary instruments from the sender or originator to a receiver or beneficiary locally and/or internationally and undertaken by any financial institution.

The availability of electronic payment instruments is increasing in the Philippines. Available instruments include credit transfers, card payments (credit, debit and prepaid) and electronic money. Debit transfers are yet available in the Philippines. A comparison of payment instruments is seen on Table 3.3.

65 http://www.bsp.gov.ph/payments/cor.pdf

Table 3.3. Comparison of Payment Instruments

Instrument	Payee	Payer	Channels
Cash	– Instant liquidity – Handling costs and risk of loss – Safekeeping costs – Difficult to maintain audit trails	– Wide acceptance – Handling costs and risk of loss – Difficult to maintain audit trails – Anonymity	– Agent Location – Physical interaction – For ecommerce: Agent location or Cash on Delivery (COD) at delivery location
Check	– Funds not guaranteed* – Clearing time required – Costly to handle – Highly susceptible to fraud	– Might have limited acceptance – Inconvenient – Susceptible to fraud – Suitable for person-to-person and person/business/ Government to business/ person/Government	– In person – With Check truncation through ATMs, internet and mobile banking – For e-commerce: Not common as there is a credit risk. However, it can be used for be used for COD or Pay at Agent.
Payment cards	– Funds guaranteed if based on online authorization, which enables the sale to be completed immediately – Reconciliation is easy – Explicit acceptance costs exist [66] – Fraud and security risks can exist if adequate controls are not in place – Dispute resolution process is well defined	– Wide acceptance – Convenient to use – Could lead to over-spending if use is not well controlled (credit cards) – Certain usage patterns could lead to high fees [67] – Suitable for both face-to-face and online payments, as well as for one-time and recurring payments, both payee-initiated and payer-initiated – Value added features might be included by issuers as part of product packaging (for example, travel insurance) – Easy to track usage – Fraud and security concerns; but these are actively managed by the payment networks and issuers	– ATM, POS – Agent – Internet and mobile banking – **For e-commerce:** At merchant website; at agent; or on delivery at a hand-held POS.
Debit transfers	– Clearing timelines – Suitable for recurring payments – Low processing costs – Easy to reconcile (if banking partner provides details) – Clearing timelines – Suitable for recurring payments – Low processing costs – Easy to reconcile (if banking partner provides details) – Can control initiation – In the case of authenticated and pre-approved debit transfers, suitable for online payments – Fraud and security risks can exist if adequate controls are not in place.	– Account maintenance costs – May have limited acceptance – Suitable for recurring fixed-amount payments – Often require pre-registration of the payee, making it unwieldy for unplanned and online purchases**	– Executed automatically, mandate can be placed through ATM, POS, agent, internet and mobile banking – For e-commerce: At merchant website**.
Credit Transfers	– Suitable for recurring payments – Low processing costs – Easy to reconcile (if banking partner provides payer details) – Prolongs order processing – Cannot control initiation	– Account maintenance costs – Can control initiation – Suitable for varying amount recurring payments and for person-to-person payments – Audit trails and reconciliation is easy – Low processing costs – Several channels available like Internet, ATM and mobile to initiate transaction – Fraud and security risks can exist if adequate controls are not in place.	– Can be placed through ATM, POS, Agent, Internet and mobile banking – For e-commerce: At merchant website**.

(Box continues next page)

66 It needs to be noted that all payment instruments have acceptance costs; in the case of payment cards there are certain explicit costs for the merchants. This should not be interpreted to mean that acceptance costs are high or low; a detailed contextual analysis taking into account all explicit and implicit costs needs to be done for this.

67 Certain payment card issuers or acquirers could impose specific fees for certain transactions like for examples, online bill payments, transactions at other bank ATMs and inactivity fees.

Instrument	Payee	Payer	Channels
Innovative payment products (e-money and mobile money)	– Funds guaranteed; enables completion of the sale right away – Reconciliation is easy – Processing costs could be low – Fraud and security risks can exist if adequate controls are not in place – Typically accepted by payee for low value transactions	– Limited acceptance – Convenient to use – Easy to track usage – Fraud and security concerns – Risk of losing pre-funded amount if operator goes bankrupt*** – Risks related to weaknesses in new technologies – Suitable for person-to-person payments	– ATM, POS – Agent – Internet and mobile banking – For e-commerce: at merchant website; at agent; or on delivery at a hand-held POS or mobile phone.

"Notes: * This often limits the usage for payments between trusted parties.
** This is however addressed in the systems referred to in Box on Online Banking Enabled Payments.
*** While this risk exists for other payment products as well, it is heightened in the case of innovative products, mainly because of their novelty and insufficient maturity and also because many of the issuers are non-banking institutions. This risk can however be effectively managed by instituting mechanisms like having escrow accounts.

Access Points

Access points to financial services are growing yet they are still limited. Banks' networks with branches and ATMs show significant year-on-year (y-o-y) growth. Thrift banks and rural banks expanded their office network by 8.7 percent and 4.9 percent, respectively. The number of branch-lite units[68] has grown reaching 1,892 units in the first quarter of 2019. The number of credit cooperatives and microfinance NGOs have also grown at a significant pace. At the same time, access points to e-money agents, POS terminals, MSBs, and pawnshops showed sizable decline. The number of active e-money agents is 26,455 out of 27,933. BSP also included a preliminary data on the number of cash agents.

Box 3.1. BSP vision for an inclusive financial system

The National Strategy provides a framework to enable the government and the private sector to take a coordinated and systematic approach toward a clear vision. The overall vision is a financial system that is accessible and responsive to the needs of the entire population toward a broad-based and inclusive growth, particularly, to ensure that this financial system also serves the traditionally unserved or marginalized sectors of the population. This vision is guided by a focus on the client.

- Presence of a wide range of financial services that serve different market segments
- Financial services are appropriately designed, priced, and tailor-fitted to market need
- Presence of a wide variety of strong, sound and duly authorized financial institutions utilizing innovative delivery channels
- Effective interface of bank and non-bank products and delivery channels
- Use of technology and innovation to reach the financially excluded
- Adequately educated and protected citizenry confident to make well-informed financial decisions
- Comprehensive and robust financial inclusion data and measurement

Source: BSP (2015).

68 A branch-life unit refers to any permanent office or place of business of a bank, other than its head office or a branch. A branch-lite unit performs limited banking activities and records its transactions in the books of the head office or the branch to which it is annexed.

Table 3.4. Select Data on Financial Inclusion in the Philippines

Banks and Automated Teller Machines (ATMs)*

	2018 Q3	2019 Q3	Growth
Banks (head office, branches, and other offices)	12,100	12,638	▲ 4.4%
Universal & Commercial Banks	6,562	6,815	▲ 3.9%
Thrift Banks	2,562	2,616	▲ 2.1%
Rural & Cooperative Banks	2,976	3,207	▲ 7.8%
ATMs	21,095	21,437	▲ 1.6%
On-site ATMs	11,720	11,864	▲ 1.2%
Off-site ATMs	9,375	9,573	▲ 2.1%

*Nationwide count only (i.e., excludes offices/ATMS of Philippine banks abroad)

Branch-lite

	2018 Q3	2019 Q3	Growth
Number of operating branch-lite units	1,762	2,105	▲ 19.5%
Number of cities and municipalities with branch-lite	756	841	▲ 11.2%
Number of cities and municipalities without head office/branch but with branch-lite	156	187	▲ 19.9%

"Branch-lite" gives banks the flexibility to determine the appropriate size and model of a banking office for a specific area or locality based on market needs (BSP Circular No. 987)

Other Financial Service Access Points

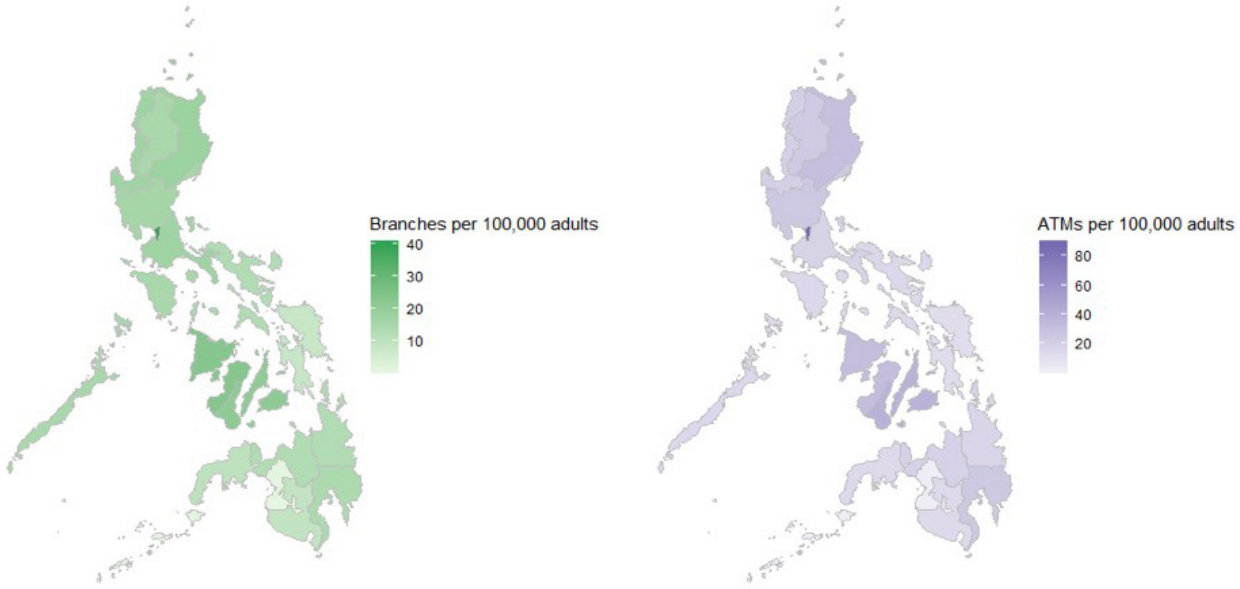
	2018 Q3	2019 Q3	Growth
NSSLAs	197	200	▲ 1.5%
Pawnshops	11,563	13,497	▲ 16.7%
Money Service Businesses (MSBs)	5,290	6,818	▲ 28.9%
Other NBFIs (1)	218	235	▲ 7.8%
Cash agents (2)	17,057		---
	2017	2018	Growth
E-money Agents (3)	41,990	27,993	▼ -33.3%
Point of Sale (POS) Terminals	119,559	103,852	▼ -13.1%
Credit Cooperatives (4)	3,664	3,881	▲ 5.9%
Microfinance NGOs (5) (2016 vs. 2017)	2,603	2,861	▲ 9.9%

[1] Other NBFIs include lending investors and financing companies (that are affiliated with BSP-supervised banks), credit card companies, investment companies, securities dealers/brokers, government NBFIs and credit granting entities (excluding MF NGOs) which are supervised by the BSP.
[2] Preliminary data based on banks implementing/piloting the case agent model (BSP Circular No. 940).
[3] Total number of registered e-money agents, of which 26,455 are considered active in 2018 based on preliminary data. This count includes agents that are pawnshops, MSBs, and cooperatives.
[4] Sourced from the Cooperative Development Authority (CDA). In 2018, there were 28,784 coops in the registry.
[5] Based only from a sample of MF NGOs that responded to the BSP data request.

Source: BSP Financial Inclusion Dashboard (2019 3Q).
Available Online: http://www.bsp.gov.ph/downloads/Publications/2019/ FIDashboard_3Q2019.pdf

Expanding access points to payment services is a challenge in promoting financial inclusion. Establishing a full-service branch has serious cost implications in areas with low financial transactions in particular areas at a low level of lending activities. This is relevant to the Philippines where the numbers of branches and ATMs per 100,000 adults for some regions have been relatively low (Figure 3.4). In the quest to expand access to payment services in a cost-effective manner, banks and other institutions began using local entities like small shops to provide basic payment and banking services on their behalf. Brazil was one of the early adopters of this model and various countries have begun adopting this (World Bank, 2012). Countries introduce a regulatory framework for using a third-party entity (typically a merchant) as an agent of a financial institution. To promote access points, BSP issued a regulation on cash agents (Circular No. 940). The cash agent regulation issued under Circular No. 940 allows banks to tap third party entities to accept and disburse cash on the bank's behalf, subject to existing rules on outsourcing and compliance with certain conditions. In 2019, over 17,000 cash agents were reported.

Figure 3.4. Number of Branches and ATMs per 100,000 adults across the regions of the Philippines (June 2018).



Source: BSP

To further complement its effort to expand access points, BSP issued a regulation on branch-lite unit[69] **(Circular 987).** The circular aims to promote greater access to efficient and competitive banking services through the adoption of proportionate regulatory framework that provides banks with flexibility to execute their strategies and enables them to innovate in line with their business model[70]. As of the third quarter 2019, the number of operating branch-lite unit in the country has two-digit growth year-on-year at 19.5 percent, faster than the y-o-y growth in the 1st quarter of 2019 at 12.0 percent.

Recent Legal and Regulatory Development

Several important milestones with respect to creating the legal foundations of digital payments have been achieved. The legislature has enacted the new central bank charter, as well as well as the National Payment Systems Act. The new laws have formalized the role of the BSP as the overseer and the regulator of the national payments system, clarified several concepts such as settlement finality or netting, as well as paved the road for greater participation of non-banks in payment systems.

BSP has made continuous efforts to create an enabling regulatory environment to promote digital financial services and payments. These regulatory reforms intend to increase transaction account opening and usage. Often, fees associated with opening, maintaining, and using accounts can be high. Bank accounts that are often referred to as 'no frills' accounts that have no minimum balance requirements and low fees for transactions have been introduced in many countries to promote account opening and usage. The Philippines introduced such an account called a basic deposit account. BSP issued Basic Deposit Account (BDA) – BSP Circular No. 992. The BDA is designed to meet the need of the unbanked for a low-cost, no-frills deposit account which they can open even if they do not have the standard identification documents. The regulation enables banks to offer such basic accounts, free of charge, and with a prescribed bundle of payment services—such as free cash withdrawals—included without any additional fees. The framework allows banks to design their own BDA as long as it meets key functions such as no dormancy charges, a maximum balance being PHP 50,000. Banks can enjoy zero required reserve requirements when they offer BDA. In addition, BSP issued a series

69 A branch-life unit shall refer to any permanent office or place of business of a bank, other than its head office or a branch. A branch-lite unit performs limited banking activities and records its transactions in the books of the head office or the branch to which it is annexed.
70 BSP Circular 987 (2017)

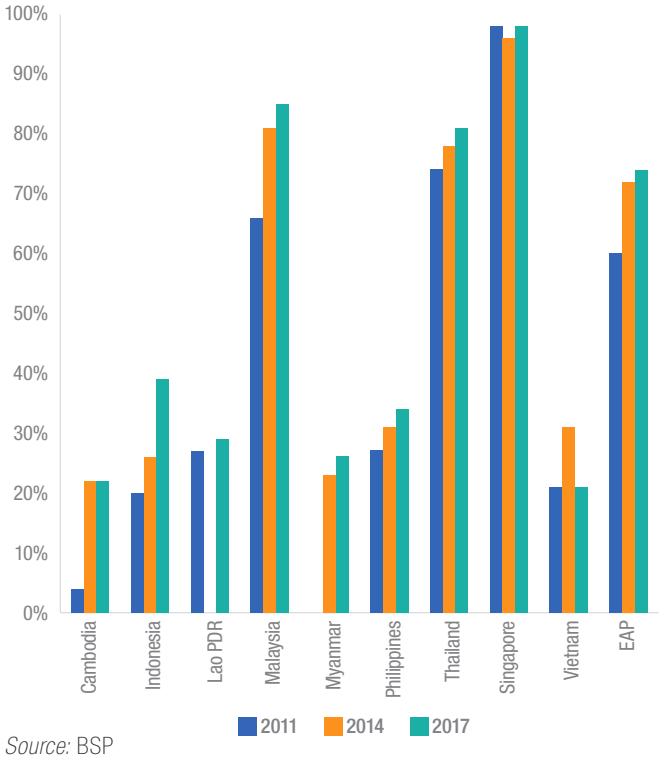
of regulations such as No. 1033 (Amendments to Regulations on Electronic Banking Services and Other Electronic Operations), No. 1049 (Rules and Regulations on the Registration of Operators of Payment Systems) and No. 1055 (Adoption of National Quick Response Code Conduct) in order to create enabling regulations that are intended to promote digital payments.

Transaction Accounts – Access and Usage

Access to a transaction account is usually an entry point to the financial system. Efficient, accessible and safe retail payment systems and services are critical for greater financial inclusion; and a transaction account is an essential financial service in its own right and can also serve as a gateway to other financial services (CPMI and World Bank Group, 2016). A transaction account is referred to as an account that enables a customer to make and receive payments and to store monetary value with a bank or other payment service providers. Expanding access to a transaction account to those without access to financial services is critical to promote financial inclusion via using digital payments. According to the Global Findex, globally 52 percent of adults made at least one digital payment in a year, which represents around 76 percent of those with access to a transaction account.

With the development of payment systems, the Philippines has a great opportunity to increase digital payments; however, low level of access to transaction accounts remain as a key obstacle. In 2017, only 34.6 percent of adults had accounts; slightly up from 31.3 percent and 26.6 percent in 2014 and 2011, respectively. Account ownership in the Philippines is lagging the rest of ASEAN 5 countries (Indonesia – 49 percent, Malaysia – 85 percent, Singapore – 98 percent and Thailand – 82 percent) and East Asia and the Pacific Region (71 percent) (Figure 3.5). Wealthier adults are more than twice as likely than poorer adults to have an account. Among adults in the richest 60 percent of households in the Philippines, 45 percent have an account, against 18 percent of those in the poorest 40 percent of households.

Figure 3.5. Transaction Account Ownership among ASEAN Total Percentage of Adults (15+)



Source: BSP

The unbanked in the Philippines cite various barriers to getting an account, including distance (41 percent), high costs (53 percent), and lack of documentation – such as ID (45 percent). Those numbers are roughly twice the developing world averages. Account ownership is nearly two times higher among urban adults than rural adults. In the Philippines, 46 percent of urban residents have an account, against only 27 percent of rural dwellers.

Making and receiving digital payments remains low in the Philippines. About 25 percent of the Filipino adults made or received digital payments, up from 20 percent in 2014. In rural areas, only 18 percent of the Filipino adults made or received digital payments, up from 17 percent in 2014.

Moving routine cash payments into accounts could increase financial inclusion in the Philippines. Based on the Findex data, it is estimated that if businesses paid unbanked employees digitally instead of in cash, the overall share of unbanked adults in the Philippines could drop by 29 percent – and 10 million of these workers have a mobile phone which could

help facilitate the switch to electronic payroll. In addition, if the government digitized payments of wages, social benefits, and pensions, the share of unbanked women could fall by up to a fifth – including 3 million with a mobile phone. See Box 3.2 for digital payments solution during the COVID-19 pandemic.

Box 3.2. Digital payments solutions in the COVID-19 pandemic

The COVID-19 pandemic and ECQ created emergent needs to provide financial support to those significantly affected. Under the Bayanihan to Heal as One Act (Republic Act 11469), an emergency subsidy is provided to around 18 million households between PHP 5,000 and 8,000 a month for two months. The existing Pantawid (conditional cash transfer program) beneficiaries will receive the subsidy together with Pantawid payments through Land Bank's cash card (a single-purpose prepaid card) and rice farmers will receive it with a rice subsidy in cash.

However, many of the emergency subsidy are not beneficiaries of either program. Over 65 percent of Filipino adults do not have any transaction accounts (bank or e-money accounts) according to the Global Findex in 2017. The Department of Social Welfare and Development (DSWD) has made a significant effort to deliver the emergency subsidy payments as quickly as possible provided the restrictions such as social distancing are met. Private sector financial institutions have also actively responded to the needs to distribute such emergency subsidy digital.

DSWD have been exploring partnership with E-money issuers such as G-Cash and PayMaya to deliver digital payments. The Rizal Commercial Banking Corporation (RCBC) also deployed its ATMGo (a POS terminal) to remote areas to disburse payments. Temporary relaxation of customer due diligence requirements by BSP also enabled financial institutions to offer transaction accounts for emergency payments and other purposes. At the same time, challenges such as identification of beneficiaries, updating IT systems, and maximizing available payment system infrastructures in the country remain. For example, a lack of coordination among stakeholders could create many bilateral digital payment solutions which could increase costs of operation and confusion among beneficiaries. Although it is challenging to develop a strategic approach at the time of crisis, best practices from different countries could help the government implement practical delivery mechanisms.

Source: World Bank (2019), World Bank (2020)

The BSP has prioritized strengthening financial literacy and consumer protection of the users of payment services, as part of its financial inclusion outreach efforts. This includes outreach activities, as well as alternative dispute resolution mechanisms (the bank maintains a desk where members of the public can lodge complaints or concerns with respect to financial services received). While the regulator remains reluctant to directly intervene in the market and take part in setting prices of financial services, it aims to foster market-driven pricing and enhance transparency by providing consumer information—for example, the BSP website shows a list of fees charged by BSP supervised financial institutions for electronic fund transfer (EFT) services under the NRPS Framework.

Digital Payments for e-Commerce

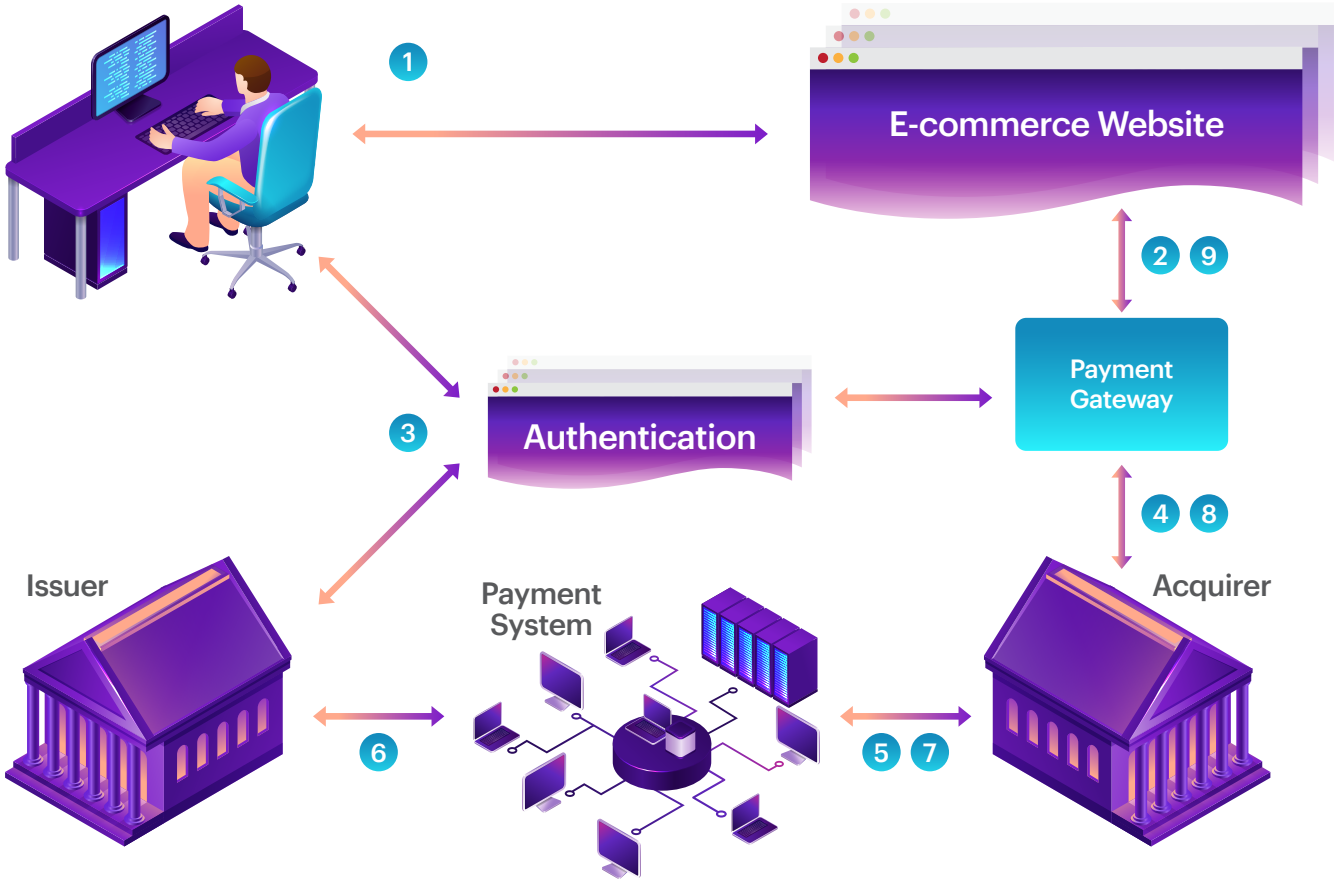
Digital payments facilitate e-commerce transactions. E-commerce policies and regulations are considered potential enablers for the expansion of digital financial services mainly because (a) e-commerce companies can push customers to become familiar with a digital interface and make payments through digital channels, (b) they are becoming financial service providers for the stakeholders along their value chain, and (c) they are an important source of alternative data on current or potential customers for financial institutions (World Bank, 2017; ASEAN and World Bank, 2018). Figure 3.6 illustrates the e-commerce payment system.

E-commerce providers began to remove a Cash-on-Delivery (COD) payment option. Shopee (Ph) recently removed COD as a payment option due to operational costs caused by issues such as refusal of receiving parcels. Lazada (Ph) also removed COD for certain types of transactions[71] while promoting digital payments. Foodpanda (a food delivery app) initially allowed COD in the first weeks of ECQ but later it removed the cash payment option. This would help the e-commerce platform to reduce operations costs associated with delivery refusal. The shift also benefits increasing the use of digital payments since banks and payment service providers will take care of payment and risks associated with payment.

E-commerce platforms provide digital wallet and payment services to facilitate digital payments for transactions on the platforms. Two largest e-commerce platforms in the Philippines offer e-wallet and e-payment services where customers open e-wallet account or e-payment account on the platform. For example, Shopee partners with AirPay Technology, an EMI, and offers ShopeePay (in-App wallet) to facilitate digital payment transactions. By partnering with a BSP supervised EMI, the e-commerce platform provides a regulated digital payment service to its customers through a third-party payment service provider.

Consumer protection is highly important to promote digital payments for e-commerce. Consumer confidence in the right to return a defective product and receive a refund influences a decision to use digital payments on e-commerce platform. Addressing disagreement between a seller or an e-commerce platform and a consumer in the framework of consumer protection is critical.

Figure 3.6 E-Commerce Payment Processes



Source: World Bank presentation (May 2019).

71 Purchases of digital goods, goods above P50,000, overseas sellers, and multiple unsuccessful deliveries.

Digital payments are also being used for MSME payroll and supplier payments, and to disburse and collect loans. Digitizing these processes could reduce the cost to serve and form a part of an overall re-engineering of bank lending that automates MSME lending and servicing to make it a more viable product (World Bank, *forthcoming*).

Box 3.3. Enhancements to the ACH to Support Authenticate e-Commerce Transactions

In the recent past, in many countries the clearing and settlement features of the ACH have been leveraged to support online e-commerce transactions as well. ACH by design are deferred settlement systems with no means for online authentication and authorization of the payer. This has generally resulted in ACH being limited to certain types of transactions like bulk payments, person-to-person transfers, and recurring payments.

The increasing popularity of Internet banking and mobile banking, has, however, been leveraged in some countries to add on an authentication and online authorization capability to traditional ACHs. A typical transaction sequence in such an arrangement is described below.

1. The payer is ready to checkout his purchases of goods/services at the payee's website and clicks on the available payment options.

2. One of the options could be the new payment option—ACH-enabled payment.

3. The payer chooses this option and is asked to enter his bank account number and other ACH specific routing information like bank routing identification.

4. This information along with the purchase information is passed onto the additional component added to the ACH, which uses this information to re-direct the payer to the website of the payer's bank where he can authenticate himself and the payer responds back to the ACH component with the results of the authentication. At this stage, the rules of the ACH are modified to bind the payers' bank to the transaction when a successful response.

5. Based on the assurance that the payers' bank has verified and committed to accepting the transaction when presented for settlement, the payee completes the transaction.

6. There are two options for processing the settlement—either the payee can request his bank to process a direct debit to the payer's account based on the assurance received in Step 4, or the payer's bank can be obligated to process a credit transfer to the payee's bank within a specified period of time.

7. The standard ACH clearing and settlement process then kicks in.

8. There could be other variations where Step 4 can be concluded on a mobile phone by exchange of SMS messages, or by entering a PIN at a POS terminal, and so on.

Source: World Bank (2019), World Bank (2020)

Digital Payments for Government

Regarding payments to and from the government, the banking infrastructure is largely used for the payment of taxes and other mandatory contributions. In recent years there has been notable progress in migrating some types of government payments from cash and checks to electronic. This has been achieved largely for payments made by the central government to individuals, specifically for what concerns government payrolls in urban and semi-urban areas, as well as payment of pensions of the Social Security System. In terms of volume, most of such payments are made in cash at branches. These payments can also be made at the premises of other payment service providers (PSPs) and/or their agents, as well as through some electronic platforms (for example, some e-wallets).

Government agencies and payment industry players developed EGov Pay, an online facility for government collections and disbursements. EGov Pay enables citizens to pay electronically to the government. A user initiates payments through the Land Bank of the Philippines' (LBP's) Link.Biz Portal which then directs the user to the Philippine Clearing House Corporation's (PCHC's) PayGate platform where the user chooses the PSP from which funds will be transferred to the government via the PESONet. As of launch date, nine government agencies including the Bureau of Internal Revenue, Department of Trade and Industry (DTI), Philippine National Police and some local government units have been onboarded in the EGov Pay Facility. As of end April, 56 government agencies have joined the facility.

Constraints to Promoting Digital Payments

A low level of Filipino's account ownership is a key constraint to usage of digital payments. Access to and usage of a transaction account is a key driver to initiating digital payments. Although access to a transaction account alone will not increase digital payment transactions, such account will provide opportunities for the account holder to make and receive payments and store value according to their needs.

A lack of national ID has created a challenge for consumers to produce multiple IDs that are often required by commercial banks. The Government of the Philippines is currently developing a national ID system to implement the Philippine ID System (PhilSys) Act of 2018. Adequate implementation of the national ID system would facilitate access to and usage of transaction accounts. BSP has renewed its financial inclusion commitment to 70 percent of adults in 2023. The implementation of the national ID system will play a key role in advancing digital payments and economy.

While 45 financial institutions joined the InstaPay scheme, and 58 joined the PESONet scheme, the membership is not yet universal. In InstaPay, 13 participating institutions are receiver-only institutions. These do not include rural and thrift banks, the majority, of which, remain outside the interoperable retail payments infrastructure. On the other hand, InstaPay and PESONet were joined by the two largest e-money issuers, which made it possible for some wallet owners to make and receive payments to and from different providers or banks. The role of BSP as the payment system overseer to be a catalyst continues to be important to develop the National Payments System to further promote the use of digital payments.

Available payment instruments are limited since there are only two payment streams. As shown in Figure 3.2, by design, the number of ACHs is still limited to two – batch payment and real-time low value credit transfer payment. To provide payment services for the need to support economic activities, a variety of payment instruments can be developed such as direct debit transfers[72]. In addition, each ACH has its own membership structure and customers may not be able to use all payment instruments depending on their financial institutions access to ACH, which can be direct or indirect.

Gaps in the IT and telecommunications infrastructure are substantial obstacles to promoting digital payments in the Philippines. Access to digital infrastructure in the Philippines is still limited.[73] The quality of broadband and mobile connections lags behind other ASEAN economies. Remote communities often lack access to low bandwidth internet through a mobile network — and this even includes branches of thrift or rural banks operating in those areas. At the same time, even areas covered by the mobile networks suffer from service quality issues: network connections are slow, base transceiver stations (BTS) run at capacity, while connection errors abound. As a result, large parts of the population are excluded from the potential of effectively using digital payments in their everyday transactions.

72 The payee originates the payment order for the purpose of collecting funds from the payer ("payee-pull" instrument). DDTs are typically used for person-to-business, business-to-business or person-to-government payments, for example for the payment of utility bills and installment payments, and typically need to be set up in advance by the payer by way of providing explicit permission to the payee to collect funds through a DDT (Payment System Development Group, the World Bank)

73 See Chapter 2 on Philippine Digital Infrastructure.

Privacy and security concerns have constrained consumer trust on digital payments. Some consumers do not feel safe in using digital payments for fear of privacy and security breaches, or fraudulent online business practices. These security concerns have partly contributed to the preference for cash payment for online purchases for fear of non-delivery of paid items. Improving trust in the digital payment system requires ramping up security measures including a comprehensive consumer protection framework and a strong grievance mechanism.

Policy Recommendations

Encouraging wider participation in digital payments can facilitate the recovery of activities towards the 'new normal'. Since the COVID-19 outbreak, a need to shift to digital payments has become more eminent. The use of digital payments has surged, and cash withdrawal and check usage declined during the community quarantine restrictions. However, majority of Filipinos, especially the poor, continue to rely heavily on cash. Such interventions include the following:

- Mandate government agencies to make and receive payments digitally to the extent possible.
- Maximize the usage of payment system infrastructures and payment services including private sector payment service providers in delivering emergency subsidy payments and disburse payments digitally as much as possible. In so doing, avoid bilateral and duplicate digital payment solutions for similar programs which would create confusion at LGU levels and would not be sustainable.
- Encourage e-commerce and other online platforms such as logistics and ride-sharing providers to drop cash payment option and accept a wide array of digital payment instruments, and require the establishment of a strong consumer protection framework including return and refund policy.

Although the country's policy and regulatory environment is becoming more enabling for providers and customers of digital payments, many Filipinos forego using digital payments due to low account ownership and/or lack of trust in the security and efficacy of these digital financial services. The government, in cooperation with the private sector, should therefore continue its efforts in promoting the use of digital payments by implementing the measures listed below.

The BSP should continue to work with government agencies to promote the use of electronic payments through NRPS where possible. The government is typically the largest user of the National Payments System and it can often influence the design and governance of the payment systems. The government can crowd in private sector entities. This would facilitate the expansion of ACHs with multiple payment instruments and innovation. The EGov Pay facility can continue to expand the number of participating government agencies and PESONet participating payment service providers for more users. At the same time, users should have payment instrument options to choose in making the payment including cards and e-money.

BSP and other government agencies should expand access to transaction accounts where possible given the low level of account ownership in the Philippines. The government's development programs often use payment services such as conditional and unconditional cash transfers. Such payments are usually recurring payments and create an opportunity to use transaction accounts. The government should use every opportunity to increase access and use of such transaction accounts.

BSP should undertake a study of measuring the cost of payment instruments, which could further promote reforms. The role of payment system overseer is essential for payment systems reforms – in this case, promoting digital

payments. While efforts to expand access to financial services through transaction accounts continue, efforts to promote digital payments, over paper-based instruments, namely cash and checks, should be made. In order to develop a design of policy interventions, understanding the cost of different payment instruments and inducing the change of payment behaviors would be helpful (Box 3.4).

Box 3.4. Measuring Retail Payment Costs

Retail payment systems play an important role in the smooth functioning of an economy and inefficiencies in the retail payments market can have cascading effects throughout the economy. While there are issues responsible for the persistence of inefficiencies in retail payment markets, the lack of a coherent, holistic strategy for the development of retail payment systems is among the most common. To develop such a strategy, it is important to economically substantiate the migration from less cost efficient retail payment instruments (typically cash and paper-based instruments) to more cost-efficient ones (typically electronic payments). A good understanding of the costs associated with different retail payment instruments is therefore needed to inform the cost-benefit analysis of digital payment reform drive.

The results of a cost study based on this methodology can help decision makers to agree on the targeted gains in efficiency in their retail payments system, define an implementation plan for achieving a desired future mix of payment instruments, and provide information for all stakeholders involved in the retail payments market. By applying the methodology for measuring the costs of retail payments provided in this document, cross country comparability and benchmarking is possible and the experience of other countries can be taken into consideration when developing or adjusting the national retail payments strategy based on the results of the cost study.

Source: World Bank (2016)

The Government should implement PhilSys in a timely manner. A national ID is a critical enabler of the delivery of public services, social safety net, and access to financial services, among others. The role of national ID in promoting digital payments may be limited to facilitating onboarding, opening accounts, and KYC procedures. Leveraging electronic KYC could further facilitate access to financial services remotely. Along with the payment system infrastructures, a national ID system is a critical infrastructure for development in many sectors.

The government should create disincentives to use paper-based payment instruments and incentives to use electronic payments. The government can use tax incentives to encourage businesses and individuals to adopt digital payments. It can also set the fee for check clearing higher than the fee for using digital payment instruments.

The government should strengthen regulations and create programs that manage the risks of adopting digital financial technology. While the use of digital payments can facilitate significant benefits for the economy, it also poses risks that can compromise data privacy and cybersecurity, and inhibit financial inclusion instead of promoting it. Data trails created by digital financial services can expose users to misuse of personal data. Digital financial services also rely on data infrastructures that are vulnerable to cyber-attacks and system failures. Unequal access to digital infrastructure and technology can exclude the poor and those living in remote areas from reaping the benefits of using digital payments.

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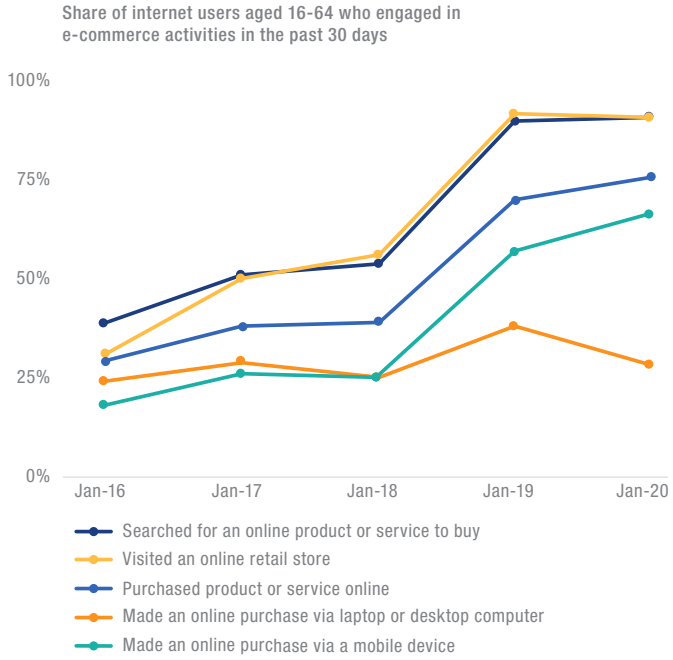
CHAPTER 4
STATE OF LOGISTICS FOR SMALL PARCELS IN THE PHILIPPINES

With an expanding domestic e-commerce consumer base, the Philippines can increase its significance in the regional and global digital market. The consumption-fueled economic growth, improving telecommunications infrastructure, and a growing proportion of the population with internet connectivity, especially through mobile phones, are some of the key factors that make the Philippines a major player of e-commerce in Southeast Asia. According to the Statista's Digital Market Outlook, the Philippine e-commerce market[74] revenue has been expanding and posted US$1.1 billion in revenues as of early 2020. It is projected to grow at annual rates of 7.9 percent and reach about US$1.5 billion by 2024.

As of January 2020, even before the COVID-19 pandemic, almost half of the 105 million Filipinos were already buying goods and services online. According to Statista, 50.3 million individuals have used e-commerce as of January 2020 in the Philippines, and this is expected to rise to 54.7 million by 2024. The average revenue from e-commerce transactions amounted to US$21.7 per user, translating to almost US$1.1 billion in sales.[75] Additionally, annual surveys conducted by Global Web Index from 2015 to 2020[76] suggested an increasing share of internet users engaging in various e-commerce activities (Figure 4.1). In the latest survey conducted in January 2020, 76 percent of those surveyed have purchased a product online using any device such as a laptop, desktop, or mobile device, while 91 percent visited an online retail store. In 2019, online spending on other goods and services amounted to US$0.3 billion on electronics and physical media; US$0.2 billion on fashion and beauty; US$0.2 billion on furniture and appliances; US$0.15 billion on toys, hobbies, do-it-yourself (DIY); US$0.15 billion on food; and US$0.05 billion on digital music.

Figure 4.1. A growing number of internet users are engaging in various e-commerce



Source: Global Web Index survey results reported by We Are Social and Hootsuite

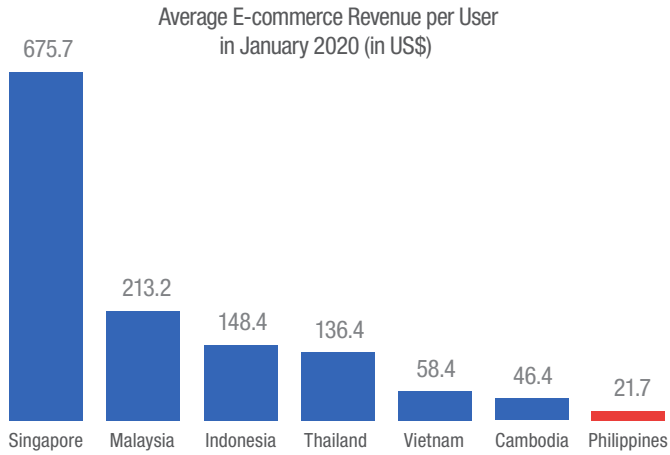
Yet, the Philippines ranks the lowest in terms of average revenue per consumer and e-commerce usage among its regional peers. Despite the increased revenues and positive prospect on e-commerce growth in the Philippines, its average e-commerce revenue per user ranked the lowest compared to other Southeast Asian (SEA) countries as of January 2020 (Figure 4.2). These indicators suggest that there is substantial room for the growth of e-commerce in the Philippines, on the back of its growing internet and smartphone penetration, rising middle class, and expanding young population.

74 Statista considers an e-commerce market that encompasses the sale of physical goods via a digital channel to a private end user (business-to-consumer [B2C]). Incorporated in this definition are purchases via desktop computer (including notebooks and laptops) as well as purchases via mobile devices such as smartphones and tablets. The following are not included in the e-commerce market: digitally distributed services (see instead: eServices), digital media downloads or streams, digitally distributed goods in B2B markets nor digital purchase or resale of used, defective or repaired goods (reCommerce and customer-to-customer [C2C]). All monetary figures refer to the annual gross revenue and do not factor in shipping costs.

75 The figures from We Are Social represent sales of physical goods via digital channel on any device to private end user, and do not include digital media, digital services such as travel software, B2B products and services, resale of used goods or sales between private persons (person-to-person [P2P]).

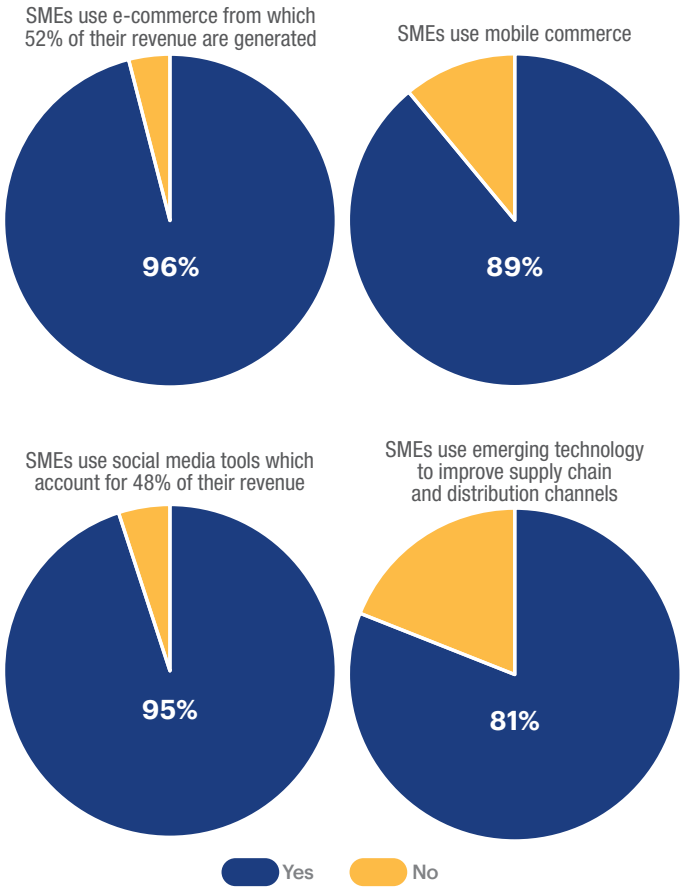
76 Data from We are Social and Hootsuite: https://datareportal.com digital-in-the-philippines?utm_source=Reports&utm_medium=PDF&utm_name=Digital_2019&utm_content=Country_Link_Slide

Figure 4.2. The Philippines' e-Commerce revenue per user ranked lowest in SEA



Source: Statista

Figure 4.3. A number of SMEs are already realizing the benefits of going digital



Source: FedEx Business Insights, "E-Commerce use of selected SMEs"

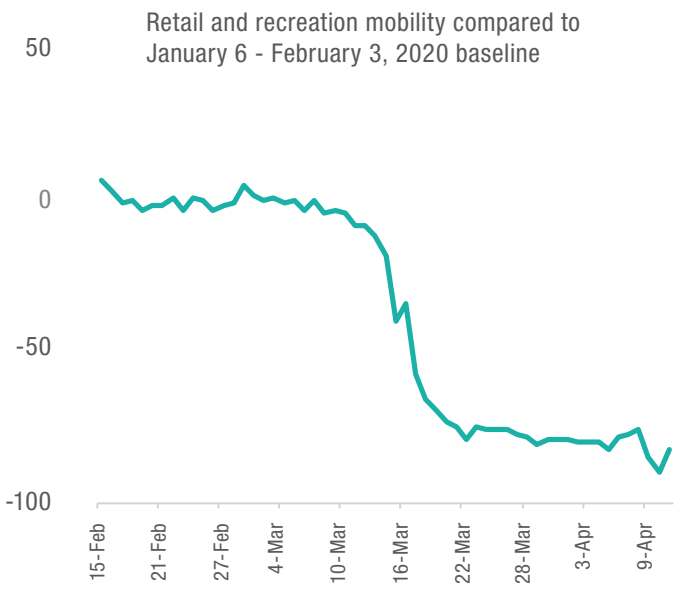
Even prior to the epidemic, Filipino SMEs have begun selling online and may have already gained some benefits from going digital. Filipino companies, from SMEs to giant corporations, are complementing their existing brick and mortar stores with e-commerce to broaden their consumer base and expand their market. Many e-commerce merchants also set up Facebook and Instagram pages where they post images and details of their products to enable online browsers to enquire and review product details directly with the company or the merchant for a better-informed purchase. A 2018 survey on SMEs in the Asia Pacific, including 500 SMEs in the Philippines,[77] indicated that 96 percent of the surveyed SMEs use e-commerce which helped generate 52 percent of their revenues, while 89 percent of them also use mobile commerce. Furthermore, the survey also revealed that 95 percent of the SMEs use social media tools and 81 percent of them also use emerging technology to improve supply chain and distribution (Figure 4.3).

Furthermore, the recent COVID-19 pandemic is forcing consumers and businesses to go digital. Quarantine restrictions brought about by the pandemic starting on March 15, 2020, indicate a substantial fall in retail activity, with analytics on freely available big data indicating an 80 percent drop in visits to malls, restaurants, and movie theaters (Figure 4.4). According to Google Trends, consumer taste has moved towards increased consumption in movie streaming and getting delivery, owing to restrictions on leaving the house (Figure 4.5). This transformation is paralleled by banking reports of surges in the use of digital payments and online transactions.[78]

77 The 2018 survey results were obtained from "Global is the New Local: The Changing International Trade Patterns of Small Businesses in Asia Pacific". The study surveyed 4,573 SMEs across Asia Pacific, including 500 respondents from the Philippines, and was conducted by a private firm commissioned by FedEx.
Sources: http://fedexbusinessinsights.com/en/sme/global-is-the-new-local/, http://www.pna.gov.ph/articles/1046522 , https://www.bworldonline.com/local-smes-plan-to-increase-exports-outside-asia-pacific/

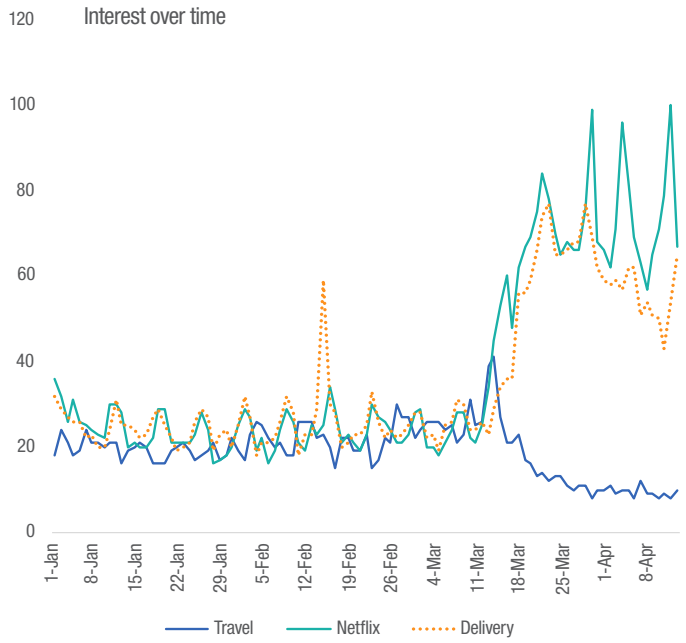
78 https://www.sunstar.com.ph/article/1852782

Figure 4.4. Visits to retail locations have dropped by over 80 percent



Source: FedEx Business Insigha Source: Google COVID-19 Community Mobility (May 9, 2020) ts, "E-Commerce use of selected SMEs"

Figure 4.5. People's interest and desires have changed since the ECQ



Source: Google Trends (April 15, 2020)

To fully take advantage of the new economic realities, Filipino SMEs need access to cheaper and more reliable means of bringing in inputs and delivering their products. As more SMEs are becoming aware of the potential gains of transacting online, greater demand for small parcel deliveries may ensue to support the SMEs' smaller scale of operations. Normally, large corporations can cheaply import input materials and export products by taking advantage of high-volume shipments. However, local SMEs operate on a much smaller scale and usually face high shipping and delivery costs when importing smaller batches of raw materials, which limits their production possibilities. Thus, more reliable and cheaper logistics and transportation of smaller parcels may allow local SMEs to reduce costs, improve productivity, and potentially invest in more innovation.

The State of Logistics in the Philippines

The cost of logistics in the Philippines is among the highest in ASEAN. According to a policy brief made by the International Finance Corporations (IFC), logistics costs accounted for about 27 percent of sales of manufacturing firms in the Philippines in 2017, the highest among selected Southeast Asian countries. The Philippines was compared to Indonesia (21.4 percent), Vietnam (16.3 percent), and Thailand (11.11 percent), where a similar methodology was applied. The same survey links low logistics performance in the Philippines to high logistics costs and identifies reliability as the leading supply chain performance issue for stakeholders (Figure 4.6). The World Bank Ease of Doing Business Report includes Trading Across Border (TAB) as one of the indicators that measure time and cost (excluding tariffs), associated compliance, border compliance, and domestic transport – within the overall process of exporting or importing a shipment of goods[79] in the country. Table 4.1 shows the steady decline of the Philippines' performance over the last 9 years, moving from 61st place out of 183 countries in 2011 to 104th out of 190 countries in 2019.

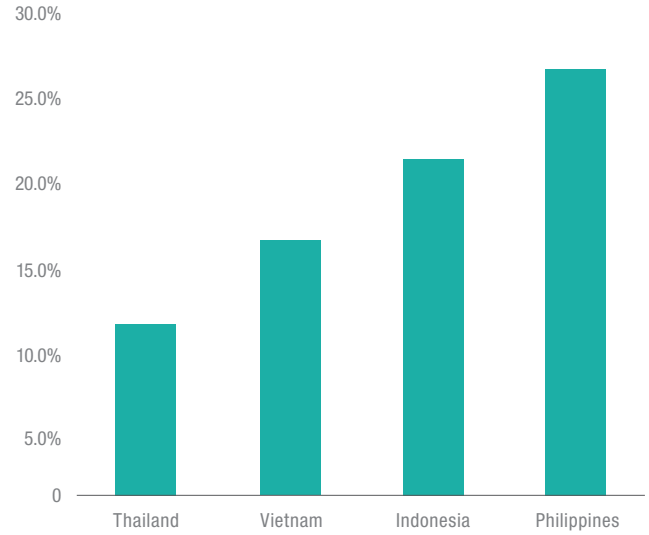
79 The Doing Business' Trading Across Borders methodology on the import and export case studies assume different traded products. It is assumed that each economy imports a standardized shipment of 15 metric tons of containerized auto parts (HS 8708) from its natural import partner—the economy from which it imports the largest value (price times quantity) of auto parts. It is assumed that each economy exports the product of its comparative advantage (defined by the largest export value) to its natural export partner—the economy that is the largest purchaser of this product. Precious metal and gems, mineral fuels, oil products, live animals, residues and waste of foods and products as well as pharmaceuticals are excluded from the list of possible export products, however, and in these cases the second largest product category is considered as needed. Source: https://www.doingbusiness.org/en/methodology/trading-across-borders

Table 4.1. Rank in World Bank's Doing Business - Trading Across Borders Indicator

Hiring and firing practices	2011	2012	2013	2014	2015	2016	2017	2018	2019	2018 vs. 2019	2011 vs. 2019
Brunei Darussalam	52	35	40	39	46	121	142	144	149	-5	-97
Indonesia	47	39	37	54	62	105	108	112	116	-4	-69
Thailand	12	17	20	24	36	36	56	57	59	-2	-47
Singapore	1	1	1	1	1	41	41	42	45	-3	-44
Philippines	61	51	53	42	65	95	95	99	104	-5	-43
Vietnam	63	68	74	65	75	99	93	94	100	-6	-37
Malaysia	37	29	11	5	11	49	60	61	48	13	-11
Cambodia	118	120	118	114	124	98	102	108	115	-7	3
Lao PDR	170	168	160	161	156	108	120	124	76	48	94
Total respondents	183	183	185	189	189	189	190	190	190		

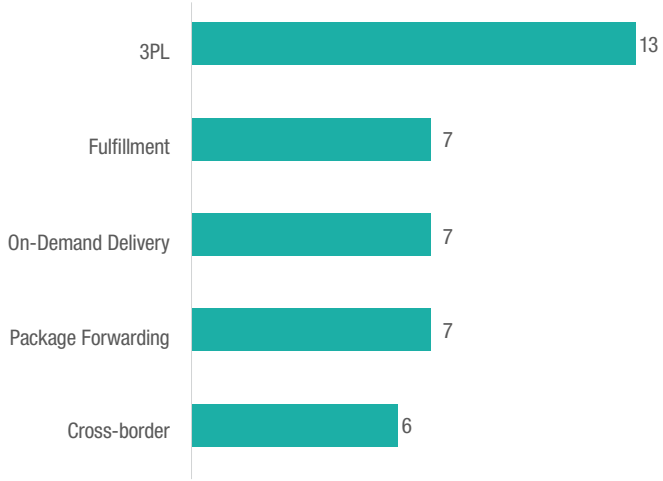
Source: World Bank

Figure 4.6. Logistic Costs as Percent of Sales in Manufacturing Firms



Source: IFC (2020)

Figure 4.7. Logistics Players in the Philippines E-Commerce Landscape in 2016



Note: 3PL players include: LBC, Xend, Post10, Fastrack Move One, JRS Express, ABest Express, 2GO, Linex, Air21, Ninja Van, WWW Express, Black Arrow, and City Xpress; Fulfillment includes: aCommerce, Aden, SP Ecommerce, GAC, Quantum, LBC, and Linex; On-demand delivery includes: Grab, Mober, Rocket Uncle, Pas Paas, Deliveree, Metromart, and Etobee; Package forwarding includes: Shipping Cart, Pobox.ph, Johnny Air Plus, Border Linx, USADirectPHL.com, and MyShoppinBox; and Cross border includes: Quantum Solutions, Air21, Dimerco, Linex, RAF International Forwarding Phils, and DPEX Worldwide.

Understanding the Philippines' E-commerce Landscape

As more sales are done in the digital marketplace, the Philippines' logistics industry has attempted to provide complementary services in support of the increasing amount of online transactions. The continued rapid growth in the e-commerce market in the Philippines demands an equally rapid and innovative response from transport and logistics businesses. This response is apparent in the arrival of new players in the logistics segment of the e-commerce landscape. The logistics industry is beginning to catch up, as can be noted in the number of players in the logistics subsectors: 6 in cross-border logistics, 6 in package forwarding, 13 in third party logistics (3PL), 7 in on-demand delivery, and 7 in fulfillment logistics (Figure 4.7).

Furthermore, emerging e-fulfilment services are enabling e-commerce companies to deliver better end-to-end consumer experiences. E-fulfilment is defined as the people, processes, and technology required to deliver an online order to a customer. Some dedicated companies have been set up to service this need, offering organizations participating in e-commerce with the opportunity to outsource the critical part of their value chains such as warehousing, shipping, logistics management, and last-mile delivery. This trend also posed a challenge to the existing and established

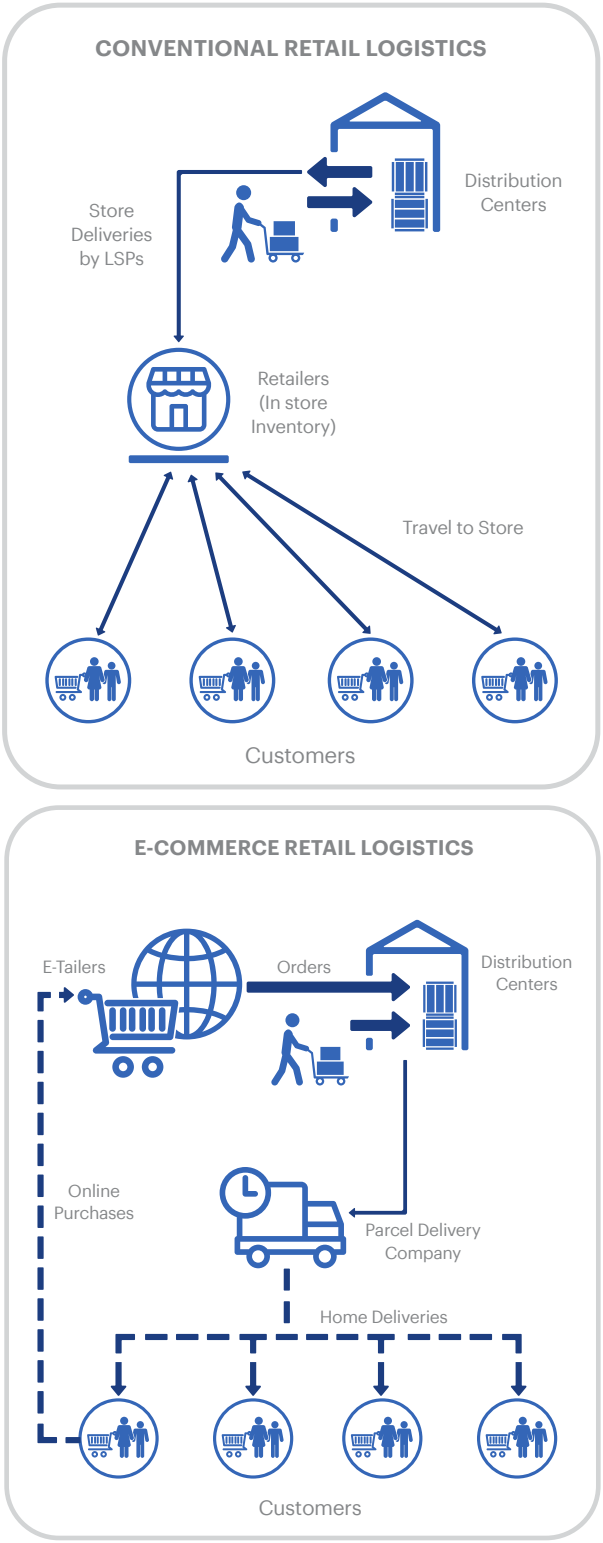
'more traditional' delivery companies such as UPS, FedEx, DHL, Air21, LBC, 2GO, and PHL Post, which will need to step up to handle the scale, sophistication, and geographic coverage demanded by e-tailers (online retailers) and to manage the volume of these transactions under different cost structures. The last mile segment of the transportation and logistics industry has exploded with new options that include: (a) technology companies like Grab, Mober, NinjaVan, Lalamove, and Transportify that mostly use crowdsourcing for deliveries, and (b) niche market delivery services for restaurants, grocery, or single-item delivery services: Grab Express, Food Panda, and Lalafood.

Traditional retail stores are still prevalent in the Philippines and still require transportation and logistics services. In conventional retail logistics (Figure 4.8), customers are assuming the whole function of purchasing down to the 'last mile' in freight distribution by traveling to the store and back.

However, e-commerce transactions engendered more ways to expand the market and led to more innovative and faster delivery and logistics services. The emergence of e-commerce retail logistics (Figure 4.8) has changed the relationships between customers and retailers. In this model, the customers are directly linked to the supply chain since they are ordering a product through a virtual interface with stores before it reaches the distribution center directly. The deliveries are now the responsibility of the e-tailer on its own or through a third-party delivery service, a move away from standard retailing where the customer took charge of the goods as soon as they were purchased.

E-commerce growth requires logistics firms to rise to the challenge posed by small parcel deliveries. With e-commerce geared up for expansion, new logistical solutions are needed to set up and scale up. Logistics firms need to think beyond the narrow dimension of their service offering and ensure that they integrate seamless logistical solutions for the delivery and return of goods, as well as uphold high standards of customer service, to stay in the market. Game changers as well as new entrants that provide technology-driven end-to-end logistics solutions for e-commerce are investing heavily in technology and are also moving forward to tailor-made solutions for business-to-business (B2B) customers that include warehousing and inventory management.

Figure 4.8. Retail logistics and e-commerce



Source: Adapted from Rodriguez J.P., et al., 2017[76]

80 Accessed from: https://transportgeography.org/

Express delivery services (EDS) have also become essential in supporting more efficient and fast-paced transactions. The growing demand for fast and reliable means of transporting documents and goods paved the way for the EDS in the Philippines and it has become one of the most essential sectors of the economy. Ken Research estimated that the total express market in the Philippines was valued at PHP 22.08 billion in 2012, distributed among key players as shown in Figure 4.9.[81] In 2012, the express services through road transport dominated the market share at 74 percent of the total express delivery while air express accounts for 26 percent of the market (Figure 4.10).

Figure 4.9. Distribution of total express market in the Philippines in 2012

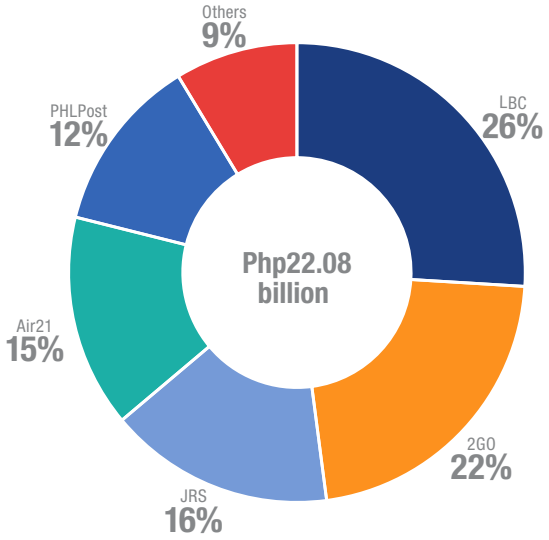
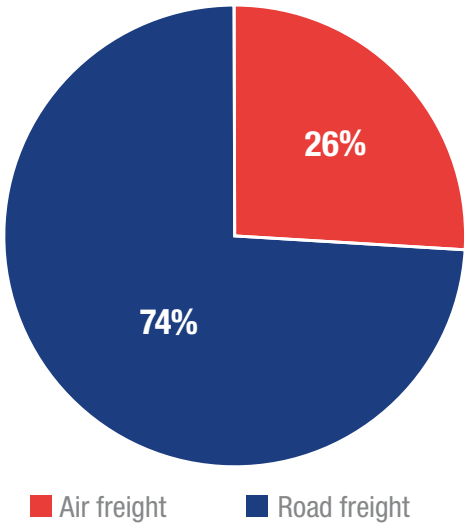


Figure 4.10. Most of the express deliveries were rendered through road transport



Source: Ken Research

Improving Competition and Investment in Logistics

Enhanced competition in the domestic market may facilitate faster growth and more innovation in logistics, especially of EDS to support the Philippine e-commerce industry. With the passage of the Foreign Investment Act of 1991 and the increasing demand for air parcel delivery services, major parcel delivery and logistics operators such as FedEx, UPS, and TNT entered the Philippine market. More recently, the entry into force of the ASEAN Economic Community (AEC) should facilitate the entry of foreign logistics providers in the near future. This will compel domestic freight forwarders to become competitive or consider possible joint venture agreements with foreign freight forwarders or accept equity investments from them.

However, the Philippine domestic logistics industry remains closed to majority-owned foreign corporations. The Philippine Constitution limits the operations and management of 'public utilities' to firms with at least 60 percent Filipino-ownership. While the legal definition of which services constitute a public utility remains undefined, court cases filed by local freight forwarding companies against FedEx and other international air freight forwarders have led to judicial rulings against the legality of foreigners operating in international air freight services (Rappler, 2013). As such, DHL and FedEx can only transport cargo to and from the international airports, and the domestic distribution of these parcels need to be fulfilled by local logistics corporations. Even the AEC promises of liberalized investment policies throughout ASEAN remain stymied by existing regulations in other countries like Indonesia, Thailand, and Vietnam, which prevent majority foreign ownership in air, land, and maritime transport activities, which undoubtedly restrains investment and innovation in the logistics market at a time when e-commerce requires new processes and paradigms (Kampan, 2017). As such, even Indonesian logistics services firms, such as Go-Jek, have been unable to enter the Philippines due to legal ownership requirements (Rey, 2019).[82]

81 Data obtained from PHLPost's Roadmap to 2020
82 Instead of a transport and logistics provider, Go-Jek entered the country by acquiring Coins.Ph, a Philippine Fintech startup as its strategic approach to expand in the country.

The passage of the Public Services Act amendment can lead to the liberalization of the logistics sector to foreign entities, spurring investments, and innovation in the sector. Pending legislation in Congress limits the definition of public utilities to the following sectors: distribution of electricity, transmission of electricity, and water pipeline distribution system or sewerage pipeline system. Such an amendment will clarify the status of all logistics services across the value chain and allow for the flourishing of new logistics services.

Small parcel delivery is a regulated service in the Philippines not as transportation but as communication. The Philippines Postal Service Act of 1992 defines 'parcel' as a rectangular box, the dimension and weight of which is as specified by PHLPost or the government, containing goods or some form of transportable property intended for delivery to an addressee prominently displayed on at least one (1) of its sides.[83] The operations of express delivery and messenger services are regulated and currently requires registration with the Department of Information and Communications Technology (DICT).[84] As of January 2019, there are a total of 113 courier service providers authorized by the DICT, of which only eight (8) companies are authorized to operate nationwide and about sixty (60) companies focus their operations within the National Capital Region (NCR), while the rest are concentrated in one or more regions.[85]

Land transportation of small parcels, although becoming more competitive due to the onset of tech-based and platform-based logistics services, still faces several and mostly regulatory challenges. One of the main regulatory issues is the ambiguity as to which appropriate regulatory body should these varieties of logistics providers submit to. The Philippine Postal Service Act of 1992 requires registration of postal service establishments and the regulatory authority (Department of Transportation and Communications [DOTC], now DICT) to register and prequalify any person other than freight forwarders, who engage in the business of letter and parcel messengerial services, door-to-door delivery, or transporting property of others similar to mail or parcel. Freight forwarders, on the other hand, seeking to offer parcel delivery and door-to-door services, have to comply with several requirements from different government agencies such as the Land Transportation Franchising and Regulatory Board (LTFRB), Land Transportation Office (LTO), Department of Transportation (DOTr), DTI, in addition to the DICT registration. They also deal with conflicting local government ordinances, which are sometimes promulgated without coordination with other local government units, such as trucks bans, vehicle plate number coding system, and pass-through sticker requirements. Many delivery service providers also suggest updating and reorganizing the zip code system[86] to minimize delays due to difficulties in locating a shipping address.

Transforming the Philippines Cross Border E-commerce Landscape

Transparent and simplified customs procedures are a pre-condition for seamless cross-border trade in physical goods. For many shippers, some of the key barriers to cross-border e-commerce are inconsistent and complicated customs procedures, along with trade regulatory controls and clearances. With import duties varying widely among countries due to disparity in customs de-minimis rules, region-wide e-commerce and consumer adoption may also be hampered. For example, the duties and taxes for a US$50 handbag traded among ASEAN member states may range between US$0 and US$19.55, with the Philippines and Indonesia[87] charging virtually nothing as they extend a higher threshold of de minimis, US$200.00[88] and US$100.00, respectively (Table 4.2).

83 Republic Act No. 7354, an act creating the PHLPost https://www.phlpost.gov.ph/files/transparency/RA7354.pdf
84 Presidential Decree No. 240, Sec. 26 and paragraph (a) Section 27, Article 5 of RA No. 7354
85 DICT's List of Authorized Private Express and/or Messengerial Delivery Service (PEMEDES) or Courier Service Providers as of December 1, 2019 https://dict.gov.ph/list-of-authorized-pemedes-or-courier-service-providers-2019/
86 ZIP Code of Provinces in the Philippines https://www.phlpost.gov.ph/files/archive/new_zip_code_2016.pdf
87 In October 2018, Indonesia reduced its de minimis rule from USD 100.00 to USD 75.00. Effective January 20, 2020, the new regulation on the threshold exemption (de minimis) import duties via e-Commerce will be reduced from the previous USD75.00 to USD3.00 per shipment for all imported goods shipped on a B2C basis. https://www.kemenkeu.go.id/publikasi/siaran-pers/siaran-pers-ciptakan-perlakuan-perpajakan-yang-adil-dan-lindungi-industri-kecil-dan-menengah-dalam-negeri-pemerintah-ubah-ketentuan-impor-barang-kiriman-e-commerce/
88 In the Philippines, the de minimis threshold is Php10,000. Using February 2020 average exchange rate Php50.74/US$1, this amounts to US$197.

Table 4.2. Comparative Import Duties and Taxes on a US$50.00 Handbag

ASEAN Member State	Duty (US$)	Taxes (US$)	Total (US$)	De Minimis Threshold (US$)
Brunei Darussalam	0	2.5	2.5	295
Cambodia	3.5	5.35	8.85	50
Indonesia*	0	0	0	100
Lao PDR	5	5.05	10.5	50
Malaysia	0	3	3	128
Myanmar	3.75	2.69	6.44	500
Philippines*	0	0	0	200
Singapore	0	0	0	296
Thailand	15	4.55	19.55	40
Vietnam	12.5	6.25	18.75	28

Note: Calculation made based on a cotton handbag manufactured in Italy and sold in Singapore (with the exception of Singapore which was assumed to be sold in Malaysia). *No duty/taxes under the de minimise law.

Customs clearance procedures have been put in place to support cross-border small parcel deliveries but more needs to be done. The Philippines increased its de-minimis threshold to Php10,000.00 in 2016 when the Customs Modernization and Tariff Act (CMTA) was signed into law.[89] However, specific regulations and procedures in handling and clearing cross-border e-commerce shipments have yet to be issued by the Philippines Bureau of Customs (BOC). Together with other trade regulatory agencies, the BOC is also taking steps to harmonize procedures and speed up the import and export of regulated commodities. As of March 2020, the implementing guidelines for some of these provisions have yet to be issued by the BOC and the Department of Finance (DOF) as provided in the CMTA.

Adhering to global standards and best practices will help advance the Philippines' cross-border e-commerce activities. In August 2013, the World Customs Organization (WCO), where the Philippines is a member, published the E-Commerce Package[90] that includes the Framework of Standards on Cross-Border E-commerce[91] as well as documents and tools supporting its implementation like the Technical Specifications,[92] and the Immediate Release Guidelines.[93]

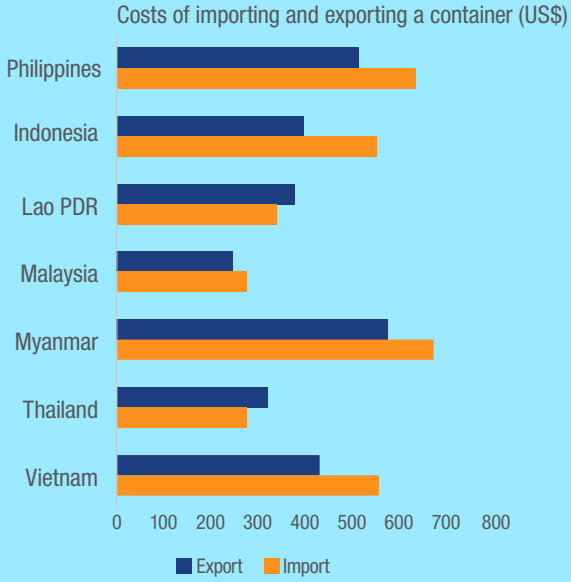
Notwithstanding the issuance of consolidated and comprehensive rules and regulations for cross border e-commerce, some of the issuances of the BOC have considered and referenced the Framework of Standards and the Immediate Release Guidelines, that is, de minimis rule in Sec. 423, CMTA as implemented by Customs Administrative Order (CAO) 02-2016 and CAO 03-2017; categorization of consignment for immediate release in CAO 05-2020 implementing Sec. 439, CMTA on express shipments procedures.

Nevertheless, there are still unresolved issues surrounding the valuation of small parcels traded across borders. Along with the customs clearance procedures for e-commerce goods, the acceptability of the transaction value for customs valuation of goods purchased in flash sales and other highly discounted values is a contested issue between importers and the customs administration (Box 4.1).

89 Sec. 423 (dd) of RA 10863 or the CMTA
90 The WCO's The E-Commerce Package can be explored in this link: http://www.wcoomd.org/en/topics/facilitation/instrument-and-tools/frameworks-of-standards/ecommerce.aspx
91 The WCO's Cross-Border E-Commerce Framework Standards can be accessed in this link: http://www.wcoomd.org/-/media/wco/public/global/pdf/topics/facilitation/activities-and-programmes/ecommerce/wco-framework-of-standards-on-crossborder-ecommerce_en.pdf?la=en
92 The accompanying Technical Specifications of the Framework of Standards on Cross-Border E-Commerce can be accessed in this link: http://www.wcoomd.org/-/media/wco/public/global/pdf/topics/facilitation/activities-and-programmes/ecommerce/1_technical-specifications_en.pdf?db=web
93 WCO's Guidelines for the Immediate Release of Consignments by Customs can be accessed in this link: http://www.wcoomd.org/-/media/wco/public/global/pdf/topics/facilitation/instruments-and-tools/tools/immediate-release-guidelines/immediate-release-guidelines.pdf?db=web

High trade costs further restrict competition and reduce domestic firms' opportunities to access larger markets. Trade costs in the Philippines are among the highest in the Association of Southeast Asian Nations (ASEAN), according to the 2019 Doing Business report (Figure 4.11). Investors in the Philippines pay twice as much to export or import a shipping container as investors in Thailand. In addition, the Philippines ranks lowest among peer countries on the World Bank's Logistics Performance Index, and it scores especially low on connectivity to international markets.

Figure 4.11. Trade costs in the Philippines are some of the highest in the region



Source: Doing Business 2019.

While the country has a liberalized trade regime, non-tariff measures (NTMs) have become an increasingly important obstacle. The country has a liberalized trade regime reflected in its low most-favored-nation tariff of 6.3 percent in 2016, only slightly higher than Malaysia's among regional peers. However, aside from tariffs, importing and exporting firms need to comply with NTMs, which encompass a wide range of requirements, including technical regulations, product standards, and custom procedures. A survey conducted by the International Trade Center in 2015 shows that 60.7 percent of Philippine exporters and 69.6 percent of importers reported obstacles due to NTMs. These figures are high compared to peers.

Trade costs and regulatory burdens are worse for firms located outside metropolitan Manila. Few agencies are automated, requiring manual paperwork and personal visits to their respective offices for the completion and submission of the requirements. For example, the Bureau of Philippine Standards processes the Import Commodity Clearances through the different regional offices of the Department of Trade and Industry, while the processing is completed by its office in Manila. Internal estimates by the Department of Trade and Industry indicate that this raises compliance costs by an additional 25 percent and increases the processing time by one month, as documents travel by mail from the regions to the capital and back. While direct international shipping is available in large port cities like Cebu and Davao, most shipping lines call mainly in Manila. Therefore, exporting usually requires transshipment through the capital and an additional freight burden to firms based in the other islands.

The country has started a trade reform process to reduce trade costs. The government signed the CMTA into law in 2016. The CMTA is a landmark law that aims to align Philippine customs laws, rules, and procedures with the mandatory standards of the Revised Kyoto Convention, the blueprint for modern and efficient customs procedures. Once fully implemented, the CMTA will provide the legal basis for the full automation of customs procedures and encourage the further simplification and harmonization of import and export procedures in line with international standards. Despite the passage of the law, the Philippines has yet to complete the secondary regulations to fully implement the law.

The management of returns in cross-border e-commerce is more challenging as it moves boundaries and is defined differently across international borders. Domestic returns are already a challenge for retailers and international returns represent a completely different set of complex challenges and unclear procedures. The Philippines BOC has no definite guideline yet in addressing certain issues such as how cross border e-commerce goods rejected or refused by customers will be returned to origin. While CAO 04-2019[94] provides the implementing guidelines for Duty Drawback, Refund, and Abatement embodied in Sec. 900 to 902, CMTA, it is not clear whether this also covers cross-border e-commerce returns.

Furthermore, the centralized customs processing and clearing imported small parcels that go through the state-owned postal delivery could be contributing to the long waiting time.[95] The importer may opt to use postal delivery services (PHLPost), instead of a private courier, as a delivery option for items bought online in other countries. As a member of the Universal Postal Union, PHLPost provides the domestic delivery service for packages arriving in the Philippines from international postal offices. However, despite the wider nationwide network of the postal state-owned enterprise (SOE), it usually takes longer to receive the package, especially when consigned to a provincial delivery address. This could be due to the central customs clearing done in the offices of exchange (OEs) which are located in Manila – the Airmail Exchange Department (PHMNLA), the Express Mail Exchange Department (PHMNLB) and Surface Mail Exchange Department (PHMNLF),[96] despite the presence of regional or provincial branches in other areas with access to international airports where another OEs may also be opened, such as Cebu and Davao. There is also the issue of 'double clearing' when an imported package reaches the Central Mail Exchange Center (CMEC), it goes through customs already, but when the package arrives at the PHLPost Central Office, customs authorities may re-tag some packages to undergo the same clearing process. While the local customs offices in the provinces can attend to inquiries and provide assistance to postal consignees in their respective jurisdictions, consumers whose goods were shipped through the postal service have no recourse but to pay duties and taxes which are assessed at the OEs in Manila.

Another option is to transport small parcels via consolidation and usage of full-container load (FCL) shipping which may reduce cost but poses potential legal risks. A common practice among importers of consumer goods is to consolidate their shipments with other importers (either via themselves or through a cargo consolidator) and do an FCL shipment. However, to save on costs and simplify documentation, the consolidated items with different bills of lading are declared under a single consignee, despite not necessarily knowing the owners or contents of the other shipments in the shared container.[97] This informal consolidation method[98] may contribute to transport cost reduction but may pose potential accountability and legal risks. Thus, smaller enterprises still face high logistics costs and risks when they opt to ship small parcels via ocean freight which effectively prohibits them from sourcing cheaper but quality input materials abroad and fulfilling their commitments with their online customers. These, in turn, limit the significant gains that an SME could realize by catering to an expanded online market.

On the other hand, less-than-container load (LCL) shipments may seem more viable but they are laden with regulatory issues that effectively bring the costs higher than

94 CAO No. 04-2019 on Duty Drawback, Refund, and Abatement can be accessed in this link: http://customs.gov.ph/wp-content/uploads/2019/05/cao-04-2019_Duty_Drawback_Refund_and_Abatement.pdf

95 An amended memorandum of agreement was signed by BOC and PHLPost on March 21, 2016, which outlined the handling, examination, assessment, appraisal and collection of duties, taxes and other charges on postal items. The "2016 MOA" can be accessed at http://customs.gov.ph/wp-content/uploads/2016/09/cmc-93-2016-AmendedMemorandumofAgreementbetweenthePhilippinePostalCorporationPHLPostandtheBureauofCustomsBOC.pdf

96 Central Mail Exchange Center (CMEC) Process Flow can be accessed in this link: http://customs.gov.ph/wp-content/uploads/2012/03/CMEC-Flowchart.pdf This practice, known to sector players as "consignee rental", or "benchmarking", is done to save on the 'tara' or informal payments made to facilitate clearance and movement of traded goods.

97 This practice, known to sector players as "consignee rental", or "benchmarking", is done to save on the 'tara' or informal payments made to facilitate clearance and movement of traded goods.

98 The term "informal" is used as this is not the regular consolidation that passes through customs-approved off-dock CFS operators

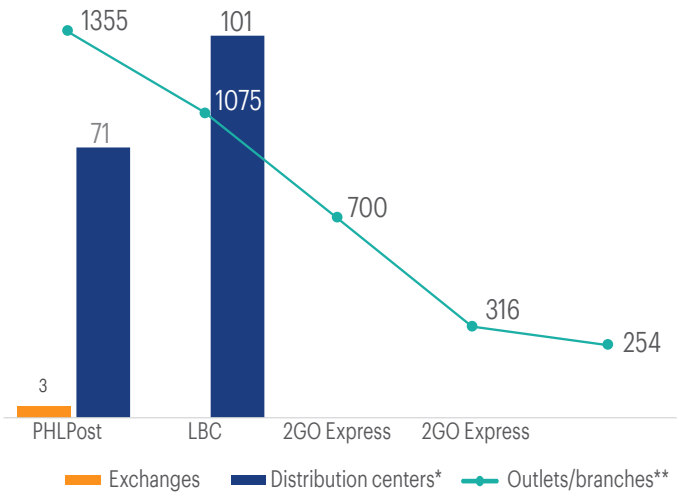
FCL. LCL shipments are handled by off-dock container yard/container freight stations[99] or customs facilities and warehouses (CFWs).[100] Currently, there are only 12 CFWs of this nature in the Philippines, 11 of which are members of the Association of Off-Dock CY/CFS Operators of the Philippines (ACOP). The limited number of CFWs, which are concentrated mainly in Metro Manila, may be attributed to the BOC's memorandum order[101] stating that no new application shall be approved unless the aggregate capacity utilization (ACU) of existing operators exceeds 50 percent, which presently has not been reached. The ACOP asserted that as of 2017, the ACU is only 23 percent (Portcalls, 2018). There are also indications that despite the BOC's regulation on uniform charges that CFW operators can impose, the warehouse charges on imported goods are still considered contributing to the high cost of doing LCL shipments.

Theoretically, shipping small parcels by sea via LCL would be ideal for SMEs, but regulatory and handling concerns effectively increase its actual costs and thereby limit its usage. For those SMEs which are more constrained by costs than time, loose cargo or LCL shipping via sea freight, where several importers share the cost of container space, would lower their logistics costs relative to shipping via expensive air freight or using an entire container (FCL shipment) but is not being able to maximize it due to their relatively lower volume given the SME's smaller scale of operations. However, currently, it can be observed that most of the patrons of LCL shipping in the Philippines are not SMEs but the bigger firms and multinational corporations.[102] As it turns out, an LCL shipment takes a long time to process and requires additional charges per shipment which effectively raises its costs for an individual online seller or an SME with lower volumes to transport. LCL is akin to the carpooling of parcels from different shippers. It also offers door-to-door services. However, because of the additional charges and the larger amount of regulatory and handling issues involved along the chain of an LCL shipment, including customs processing, terminal handling fees, warehouse charges, trucking charges, forwarding charges, and other smaller charges (Habito, 2019), small shippers may find using FCL shipment more cost-effective.

Domestic Logistics

The state-owned PHLPost, which also offers parcel deliveries, has a wider network compared to private-sector logistics but the latter is preferred due to better accessibility and reliability. Postal and parcel delivery services are typically offered by the existing freight forwarders and logistics service providers (LSPs), as well as by PHLPost. Although PHLPost has one of the largest networks within the country (Figure 4.12), the retail outlets of private couriers are more strategically located in high-traffic areas like shopping malls. Furthermore, concerns about the reliability of a government postal services are still an issue, as reports of delays, losses, and even outright theft are not unusual (Gamil, 2012).

Figure 4.12. Network of Top 5 Domestic Courier Services in the Philippines



Source: PHLPost
Note: *Includes sub-distribution centers (PHLPost) and delivery hubs (LBC)
** Offices in the case of PHLPost

99 See CMO No. 32-2015 enttitled "Revised Rules and Regulations for the Establishment, Supervision, and Control of Off-Dock Container Yards and/or Container Freight Stations (OCC) and other Off-Dock Customs Facilities (OCF) outside of Customs Zones", which can be accessed in this link: http://customs.gov.ph/wp-content/uploads/2016/10/oldCMO/cmo-32-2015-revised-rules-regulations-for-the-establishment-supervision-control-of-off-dock-cy-occ-other-ocf-outside-of-the-customs-zones.pdf
100 Sec. 803, CMTA, list down customs facilities and warehouses to include: container yard, container freight station, seaport warehouses, and airport warehouses
101 See CMO No. 37-2015 for the Addendum to CMO 32-2015, which can be accessed in this link: http://customs.gov.ph/wp-content/uploads/2016/10/oldCMO/cmo-37-2015-Addendum-to-CMO-32-2015.pdf
102 As disclosed by container yard/container freight stations (CY/CFS) operators, district customs collectors, freight forwarders, and other logistics service providers interviewed.

Last-mile delivery services (LMDS) are beginning to thrive, but mostly in urban areas only. Logistics platforms performing last-mile services such as GrabExpress, Food Panda, Transportify, and Lalamove have given SMEs access to cheaper but reliable logistics and transport services without having to purchase their own delivery vehicles. However, many of these platforms have started to establish a foothold in major cities,[103] with higher demand for LMDS in urban centers driven by the stifling traffic situation more prevalent in the cities. Places in the provinces and far-flung areas that are already connected to the internet have yet to experience platform-based last-mile deliveries. The true barrier is the lack of demand as it is not feasible for many companies to service areas with limited populations.

LMDS also face several challenges in fulfilling its commitments to clients.
The cash-on-delivery (COD) payment system, although convenient for most clients, poses some risks to the delivery service provider, especially the courier or driver. Currently, many couriers of COD transactions must remit their cash collections back to the main office at the end of the day,[104] though other courier services now allow remittances through the nearest remittance centers or selected banks. Another challenge in some areas is the lack of enough motorcycle couriers as they shifted to a more informal but lucrative alternative of transporting individuals rather than parcels which bring in more ready cash profits and allow for more time flexibility.[105]

Another main issue for LMDS is the growth in the number of vehicles on the road. Growing demand for transportation of goods or people may lead to uncontrolled growth in the number of vehicles, which frequently results in traffic congestion. In the Philippines, this is compounded with the truck ban and number coding issue, whereby, the utilization of these additional vehicles, especially commodity vehicles, is not optimal most of the time. Most of the LSPs are missing the benefits of loading trucks to their optimal capacity as they are not participating in the sharing economy mechanism.

Utilizing the nationwide bus transport system and its integration into the Philippine Nautical Highway System or Roll-on/Roll-off Transport System (RRTS)[106] presents a potential line-haul solution in transporting small parcels domestically. The Philippines has a wide network of bus transport services which reaches even far-flung areas in the provinces through the connectivity provided by the RRTS. It has improved in recent years (Francisco, 2017). In this particular model, the RRTS complements the linehaul segment of the supply chain that the bus system is now addressing, providing a cheaper alternative to the high cost of air shipments and limited direct domestic ship calls from Manila to the island provinces. Taking advantage of the cargo space of buses may provide another option for SMEs and online sellers in transporting their items from one island to another.

PHLPost's role in small parcel logistics needs to be enhanced, given its essential role in the transport of goods nationwide. The PHLPost has been in the business of mail delivery for over a century. It is mandated by law[107] to provide for the collection, handling, transportation, delivery, forwarding, returning and holding of mails, parcels and the like materials throughout the Philippines, and pursuant to an agreement entered into, to and from foreign countries.[108] It has an extensive domestic acceptance, distribution, and delivery network, and has a presence[109] in almost every town, city, and in some barangays nationwide. PHLPost's strategic roadmap for 2020 is banking on three (3) growth areas such as the growing Philippine economy, flourishing e-commerce, and the increasing trend in remittances, and is aimed at pushing for its express delivery, logistics, and payment services.

103 GrabExpress delivers within Metro Manila and Metro Cebu, Lalamove operates in Metro Manila and its outskirts, Sources: https://www.grab.com/ph/express/, https://www.lalamove.com/philippines/manila/en/user-faq
104 As in the case of AirSpeed.
105 This is the case in Cebu.
106 The RRTS or the Philippine Nautical Highway System provides connectivity to the island regions through its three segments – Western Nautical, Central Nautical and Eastern Nautical.
107 Republic Act 7354, the Philippine Postal Act of 1992, amending previous regulations.
108 The Philippines Postal is a member of the United Postal Union since January 1, 1922.
109 PHLPost shared or provided with a facility by local government units (LGUs), where it does not own a facility.

Despite its size and mandate, PHLPost's role in the e-commerce space is limited. In 2012, PHLPost comprised only 12.4 percent share of the market for delivery services, and it has a negligible share for logistics, domestic and international money transfer, and bills payment and collection services. In terms of pricing, PHLPost rates both for retail and corporate segments of the market are higher than the private local service providers. Air21 and 2GO are also offering low and negotiated rates for the corporate sector while JRS has the lowest rates for retail (Table 4.3). LBC Express still dominates this particular segment of the market because of its price points, network, and reliability.

Table 4.3. Rates Comparison – PHLPost and other domestic logistics providers[110]

Provider	Origin	Destination	Qty/Wt	Destination
PHLPost	NCR	Cebu	1 box / 5 kgs	385
Air21	NCR	Cebu	1 box / 5 kgs	378
2Go	NCR	Cebu	1 box / 5 kgs	380
LBC	NCR	Cebu	1 box / 5 kgs	370
JRS	NCR	Cebu	1 box / 5 kgs	499.5

Source: PHLPost and Provider's Published Rates (data accessed on July 3, 2019)

This performance is already propped up by the fiscal and operational advantages provided to PHLPost as an SOE that are not accorded to its private competitors. To provide universal service, the Republic Act 7354 that created PHLPost, provides tax exemptions for any credit obligations included those contracted with international banks, capital gains tax, local government imposts, and fees as well as importing material needed for operations. PHLPost also takes advantage of the agency-to-agency agreements, which are widely used by other SOEs, and severely affect the ability of private operators to compete for public contracts. For instance, PHLPost secured a memorandum of agreement with the Department of Justice (DOJ) to deliver the department's international and domestic mail. In 2016, the services rendered to the government amounted to about 40 percent of PHLPost's total revenue from domestic services.

Notably, PHLPost's role in small parcel logistics is integral for last-mile delivery, especially in remote or non-urban areas. The universal service obligation requires PHLPost to serve low-volume missionary areas and non-commercially viable places that are not served by private operators. As a member of the Universal Postal Union, PHLPost provides the domestic delivery service for packages arriving in the Philippines from international postal offices.

Policy Recommendations

Achieving policy and regulatory clarity around the logistics sector will help attract private investments and improve innovation. The lack of regulatory clarity, particularly in terms of foreign investment restrictions across the different industry segments, as well as for cross-border consumer transactions, may have limited greater private sector participation. The following recommendations will help address the problem.

A review of regulatory requirements for small parcel delivery providers is necessary to support e-commerce. The transition and transfer of oversight and control functions over postal service providers from the DOTC, PHLPost, National Telecommunications Commission (NTC), and now DICT, must be reviewed and redefined to align with operational realities. With the DICT leading the way to improve the ICT landscape in the country, it would also be

110 Rates are computed using the provider's online rate calculator, door-to-door delivery within service area.

responsible for improving e-commerce, fintech, and now the regulation of express courier services engaged in handling postal commerce. Reviews of regulatory requirements in close coordination with other concerned agencies are needed to ensure policies are harmonized, guarantee seamless delivery of service, and ensure secure transactions of consumers. Legal and regulatory frameworks should address, among others, how to enhance trade flows, safety and security, and the control of physical goods through the provision of advance data across various business models, how to define the legal status and respective roles and responsibilities of the economic stakeholders involved in the e-commerce movement, how to observe privacy and anti-trust laws and protect the personal information of consumers, and how to take care of the interests of e-vendors and e-platforms, intermediaries, and customers in a fair and non-discriminatory manner. For example, while app-based logistics asset providers are riding the wave of the shared economy, the welfare, safety, security, and compensation of the outsourced human asset must likewise be considered. While reviewing the regulations around this sector, regulators must remember that there is also a need to create an enabling environment for the growth and the creation of digital business models in logistics that can be stymied by the expansion of regulations.

The swift passage of the Public Services Act amendment can clarify the legal status of foreign ownership restrictions in the logistics sector and spur greater innovation in the sector. The lack of a clear definition of what constitutes a public utility limits the ability of foreign firms to provide different logistics services in the country. With pending legislation in Congress providing a clear definition of public utilities across only the following sectors: distribution of electricity, transmission of electricity, and water pipeline distribution system or sewerage pipeline system, the passage of such a law is expected to lead to the development of novel logistics services in the country.

The implementation of the CMTA provisions for e-commerce goods, adopting the WCO recommendations in its E-Commerce Package that includes the Framework of Standards, Technical Specifications, Immediate Release Guidelines, and other documents and tools supporting its implementation, can further enhance cross-border e-commerce of the Philippines. While it is understandable that the government, through the DOF and the BOC will not be able to adopt and implement the WCO Framework of Standards and its supporting tools and documents immediately, it may do so in a phased approach. The relevant provisions of the CMTA must be harmonized and a new set of standard regulations must be issued and implemented. The lack of systematic and harmonized rules, regulations, and procedures may open significant vulnerabilities in the cross-border e-commerce supply chain, hence, Customs must work with other relevant government agencies and stakeholders to address these regulatory concerns that cut across multiple agencies.

A revitalized PHLPost can be an important anchor for the small parcel delivery logistics industry, especially for remote and isolated communities. Numerous plans have been floated by previous Philippine government administrations to transform PHLPost, including its partial privatization or entering a public-private partnership, but these programs have not fully materialized. Given PHLPost's existing asset base, immediate steps that can be taken include greater partnerships with third-party logistics providers to utilize said assets to support consolidation and last-mile delivery by using their buildings and warehouses as shared service facilities for hub and exchange, sorting, and cross-docking. A deeper legal and operational review will need to be conducted to assess which specific issues can be addressed in the short-term, such as a revision of the 2016 Agreement between the BOC and PHLPost to better reflect the provisions of the CMTA and the needs of electronic commerce, and which issues can be resolved in the medium term for PHLPost that can follow the lead of BrazilPost or SingPost in their process transformation. At the same time, the PHLPost revisions should also ensure competitive neutrality, so that any regulatory advantages accorded to PHLPost to support its universal service obligations maintain the level playing field to allow private logistics operators to compete.

Information campaigns among SMEs about the available logistics services may be crucial in encouraging them to explore the potential of e-commerce trading. Although platform-based sellers such as Lazada, Shopee, and Zalora, have good knowledge of the available delivery options, other budding online sellers that use social media such as Facebook and Instagram to reach their market may not be as well-informed of the variety of logistics services that they can tap and suit to their shipping needs. This is where the industry and the government (DTI E-commerce Office)[111] may collaborate in collecting and disseminating information to the SMEs. The annual Logistics Services Philippines Conference launched in 2018 would be a good avenue to link the logistics service sector with the SMEs and in providing an avenue for further discussion on the development and support for e-commerce logistics and delivery.

Lastly, investments in logistics must be encouraged and supported. Logistics assets require a sizeable and long-term investment, particularly in the area of warehousing, transportation, and technology. Existing logistics companies must be encouraged to upgrade their facilities, transportation assets, and ICT infrastructure and systems by providing assistance and access to long-term financing with low interest rates. The support for human capital development must be institutionalized through competency mapping and designing required skill sets, granting scholarships for technical-vocational courses in logistics, and providing a mechanism for tax exemptions on the importation of training tools and equipment, such as driving simulators, and logistics software. Finally, the government is advised to support innovative startups and enterprises that provide modern technological solutions through investments and incentives.

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111 The DTI E-Commerce Office is transitioning the Philippines E-commerce Roadmap 2016-2020 to its new and updated version

CHAPTER 5

INDIRECT TAXATION OF CROSS-BORDER E-COMMERCE IN THE PHILIPPINES

Introduction

The digital economy is a broad term, comprising a range of business lines, which raise a variety of tax compliance issues However, the main focus of this chapter is narrower. It examines the indirect tax issues raised by cross-border e-commerce transactions involving the importation of goods and services into the Philippines. According to a recent report, Philippine internet users spend an average of almost four hours a day on social media, the highest figure for users globally (We Are Social, 2020). According to the same report, in January 2020, 74 percent of internet users aged 16-64 had made an online purchase in the past month and the average spending per user in the Philippines in 2020 was US$89. One estimate suggests that the total e-commerce market in the Philippines in 2020 will total US$1.09 billion (Statista, 2020). Data published by iPrice suggest that the vast majority of these purchases are made via platforms headquartered outside the Philippines, with Lazada and Shopee dominating the market, with more than 64 million visits to their websites each month (IPrice Insights, 2020). If just half of the US$1.09 billion e-commerce market is made up of consumer purchases from foreign suppliers, the VAT loss is more than US$ 60 million.

The COVID-19 crisis is going to accelerate the shift towards online consumption. Social distancing is accelerating the growth of digital delivery models, including online sale of goods and trade in services such as education and banking as well as entertainment. This change in consumer behavior is likely to persist in the post-COVID-19 world. This makes it even more important to secure the tax base now and ensure that domestic suppliers, who already account for VAT, are not undercut by foreign suppliers who are not charging VAT.

In the light of these developments, comparing the current treatment of e-commerce transactions in the Philippines with international best practice could provide a valuable information to policymakers. The data suggest that cross-border online purchases by Philippine consumers are significant and growing but this should be verified by means of an analysis of customs data. Specifically, the numbers of low-value postal consignments arriving in the Philippines over the past two to three years and the impact on workloads at the border should be examined. Any available information about the origins of the packages and the main suppliers involved should also be obtained to verify the working assumption of this report that consumers are making large-scale purchases of goods from foreign suppliers, VAT free. The primary focus is the VAT and customs treatment of physical goods purchased online from foreign suppliers. However, this note also discusses the related issue of VAT and imports of non-physical goods and services (such as the streaming of music and films).

Direct taxation is not the main focus of this chapter, but the international community is currently debating far reaching changes to the international tax system in response to the growth in importance of the digital economy. These could have a bearing on the future direction of direct tax reform in the Philippines as it affects multinational enterprises. Consequently, this chapter includes a short discussion of the direct tax issues. That discussion also considers the possibility that some foreign resident e-commerce businesses may be structuring themselves in order to artificially avoid having a taxable presence in the Philippines in the form of a permanent establishment. This is a form of tax avoidance that was addressed by the OECD/G20 Base Erosion and Profit Sharing (BEPS) project.

Taxation of Low-Value Postal Consignments

Background

In common with many jurisdictions, the Philippines exempts low-value packages from VAT & Customs duties. However, at PHP 10,000 (US$196), the level of this exemption is relatively high. By comparison, the current exemption in the European Union is €22 (US$25). Currently, VAT and Customs duties are payable at the border as packages arrive and are administered by the Bureau of Customs (BOC). Low-value consignment exemptions have traditionally helped to manage the workloads of Customs organizations, allowing them to focus on higher-value and riskier consignments. This made sense when it was relatively unusual for consumers to make direct purchases of physical goods from foreign suppliers.

The advent of e-commerce has dramatically affected the shopping habits of consumers. It is now commonplace for consumers to purchase goods from foreign retailers online. Modern online retailers are able to combine speed of delivery with competitive pricing and affordable costs of carriage. For goods worth less than PHP 10,000, the foreign online retailer has an additional advantage because it is able to offer those goods to consumers in the Philippines free of VAT. For the consumer, the 12 percent tax saving is a clear incentive to purchase goods from abroad, sidelining domestic retailers and eroding the domestic VAT base. Consequently, Philippines based retailers that are tax compliant are systematically disadvantaged. Philippines based retailers that are not registered for VAT or Income Tax will also be tempted to source goods from foreign online retailers in order to evade both VAT and Income Tax. The tax loss is increased when foreign suppliers agree to understate the value of goods in the customs declaration, so that they appear to be below the PHP 10,000 threshold.

Modernization of Customs processes is already underway, but it does not address the impact of e-commerce on the VAT base. Currently, consumers can legitimately choose not to pay VAT on goods that they can purchase from foreign online retailers. As the level of the exemption is relatively high, the impact on Philippines' VAT base will be commensurately large. It also creates an incentive for sellers to agree to understate the value of consignments so that their customers can exploit the exemption to evade VAT. Securing the VAT base will require both a policy and an operational response.

Revisiting the Low-value Consignment Exemption from VAT

Many jurisdictions have low-value consignment exemptions, but e-commerce is calling them into question. This is because of the impact on countries' VAT base and the way in which domestic retailers are disadvantaged. Australia and the European Union have already decided to remove the exemption altogether. These examples offer a model that the Philippines may wish to follow to help secure its VAT base and increase levels of tax compliance overall.

Australia was a first mover and has applied its General Sales Tax[112] (GST) to sales of low value imported goods to Australian consumers since 1 July 2018. Prior to July 1, 2018, GST was not payable on imports if their value was no more than A$1,000. Foreign online vendors now making sales to Australian consumers that in total exceed the GST threshold (currently A$75,000) are required to register with the Australian Tax Office (ATO) and to account for GST on those sales. The Australian system provides a hierarchy of responsibility for accounting for GST on sales to Australian consumers. If goods are acquired from an 'electronic distribution platform' (EDP) based outside Australia that makes sales in excess of the threshold, the operator of the EDP will be responsible for paying the GST. If sales are made directly by a foreign Merchant, or via an EDP that is not registered for GST, the foreign Merchant will account for the GST if its total sales exceed the threshold. If neither an EDP

112 Broadly equivalent to VAT.

nor a merchant is accounting for GST on low-value imports, but the consumer is assisted in getting the goods to Australia by a re-deliverer, the re-deliverer will account for GST on sales exceeding the threshold.[113]

To enable non-resident businesses to comply with the new regime, the ATO has created a simplified online registration system. The system only requires limited information and the non-resident business is not entitled to claim any credit for GST paid, so no refunds arise.[114] Once registered, the non-resident business must charge GST on sales to Australian consumers. Details of the amounts charged must be included in the receipt issued to the customer and in the customs documentation. The GST collected in this way is then accounted for and paid on a quarterly basis in Australian Dollars.

Initial estimates were that abolition of the low-value exemption would increase GST yield by around A$300 million over three years but actual revenue to date has exceeded expectations (Duckett, 2019 and OECD 2020c[115]). The process reduces pressure on the border control process because the merchant, or online platform operator, accounts for the tax as the sale is made, and then reports and pays the tax direct to the ATO. That allows packages to be cleared rapidly at the border on the basis of the information included in the customs declaration, which will show that GST has been charged and will be accounted for. From the outset, some key online retailers agreed to comply with the new system (Alibaba and eBay) while Amazon has 'geo-blocked' consumers in Australia from using their US site to make purchases. Consumers trying to get around this by setting up a virtual private network to disguise their location will find that goods ordered from the US site can only be delivered to a US address.

The European Union (EU) currently does not charge VAT on the shipment of small consignments (less than €22) but has decided that this exemption will be abolished in 2021. This decision was announced by the European Commission in December 2017 and takes effect on January 1, 2021. The Commission's fact sheet published at the time of the decision, spells out the reasons for the policy change:

> *"**Not a level playing field:** under current rules, imported goods bought online from non-EU countries are exempt from VAT if they cost below €22. Companies based outside the EU can fraudulently mark expensive goods such as mobile phones and tablets as costing not more than €22, meaning that no VAT is paid. This puts EU businesses at a clear disadvantage to non-EU businesses (European Commission, 2017)."*

There are similarities between the EU's approach and the system already in operation in Australia. Merchants based outside the EU will be able to register and account for VAT due on sales to customers based in the EU using a simplified online process. This will be based on the existing 'one stop shop' which already collects VAT due on the electronic provision of e-services.[116] The rate of VAT payable is that applying in the country where the consumer is located. However, the total VAT due from a non-EU merchant can be accounted for in a single process through the one stop shop. Where sales take place via an online market place, the market place will be responsible for ensuring that VAT is paid in respect of goods supplied by non-EU businesses to EU consumers.

In the region, Indonesia has cut its exemption for shipments of imported goods to consumers from US$75 to US$3, per shipment. The reduced rate took effect on 30 January 2020. Levelling the playing field for domestic businesses was specifically cited as one of the reasons for the change. Local craftsmen and manufacturers of bags, shoes and garment products have been especially hard hit by tax free imports of these products.

Increasing numbers of jurisidictions are looking at how digital platforms can help secure VAT due on sales made through their platforms, including by smaller foreign suppliers that are more difficult for tax administrations to engage with. The OECD published a report on this specific topic in March 2019 (OECD 2019a). The report is designed to assist tax administrations in understanding how digital platforms can assist in the collection of VAT/GST.

113 For a fuller description of the system visit: https://www.ato.gov.au/Business/International-tax-for-business/GST-on-low-value-imported-goods/Who-charges-GST/ To see the legislation see: https://www.legislation.gov.au/Details/C2017A00077

114 That said, there is provision for offset of GST that has been paid in respect of a sale that is subsequently cancelled.

115 The report also includes recent figures for yields in the European Union, Russia, and South Africa.

116 The reason the new regime does not come into effect until 2021 is to allow all member states to make the necessary changes to the IT systems that underpin the one stop shop process.

Implications for the Philippines

The current low value consignment exemption from VAT may not be sustainable. The increase in volumes of low value consignments has led some countries, including the Philippines, to increase the threshold to help manage pressures at the border. Nonetheless, the rapid growth in e-commerce represents a threat to the Philippines' VAT base. Moreover, the exemption exposes tax-compliant suppliers in the Philippines to unfair competition. The exemption is high by comparison to the current EU exemption and some others in the region (Table 5.1). The Philippines should consider reducing, or simply abolishing the current exemption. It could adopt a staged approach to abolition, reducing the exemption in one or two steps. The reduction, or abolition, needs to be part of a broader reform that adopts international best practice to secure payment of the VAT due from the foreign suppliers and platforms. Goods on which VAT has been paid can then enjoy free passage at the border.

Table 5.1. Low-Value Consignment Exemptions in Selected Countries ($ equivalents)

Philippines	$196
European Union (from 2021)	Zero
Australia (where sales to consumers >A$75k)	Zero
Indonesia	$100
Malaysia	$128
Singapore	$300
Thailand	$28
Regional Average[117]	$131

Collection of VAT at the border in respect of all packages is not practical, given the volumes involved. Requiring foreign merchants and online marketplaces to account for VAT directly, at the point of sale, offers a solution that secures the revenue and reduces pressure on the border clearance process. The Australian and EU approaches provide a model that the Philippines can follow to secure its tax base and level the playing field for domestic businesses. Online marketplaces can play a particularly important part in securing the desired result: the EU estimates that between 70 and 75 percent of online trade is conducted through online marketplaces. Requiring non-resident businesses to collect and account for Philippine VAT may seem counterintuitive, but it is an established model. In addition to the Australian and EU systems for physical goods already discussed, we will see in the next section that this is how many countries are ensuring VAT is levied on digital services provided to their consumers by foreign suppliers.

To assess the impact of significantly reducing or abolishing the exemption of low-value consignments from VAT, the authorities in the Philippines will need to gather additional data. In particular, better data will enable more accurate estimates of the numbers of packages being sent by foreign based online merchants and marketplaces and the revenue impact of the current exemption and options to reform or abolish it.

Imposing an obligation on foreign businesses to register, account for and pay VAT in the Philippines will require changes to the VAT law. The Australian legislation was cited earlier as an example. Although the EU regime does not come into force until 2021, there is a European example of this type of legislation for comparison. The United Kingdom has made various provisions to deal with the possibility that it will leave the EU without a withdrawal agreement (the 'no deal' outcome). These include regulations that, in the event of no deal, will impose VAT on the import of packets that are below the threshold for Customs Duty (£135 or less). They make the overseas supplier responsible for the import VAT that is due and remove the existing low value consignment relief for consignments worth £15 or less.[118]

Foreign online retailers collecting and paying over Philippine VAT will need easy access to guidance on their obligations and a streamlined VAT system would aid compliance. In the next section, reference is made to the guidance that is available to help jurisdictions implement

117 World Bank (2019). This predates the reduction in Indonesia.
118 The regulations may be found here: http://www.legislation.gov.uk/uksi/2018/1376/made

simplified VAT registration and accounting processes for non-resident businesses. The simpler the VAT system is in terms of rates and exemptions, the easier it is for non-resident businesses to comply.

Interaction with Customs

Currently, the threshold for VAT and customs duties on imports are the same. However, that need not be the case. The EU will continue not to charge customs duty on goods worth less than €150 after 2021. This means that goods purchased from foreign online suppliers who have registered with the one stop shop will not be stopped at the border if they are below the customs threshold. Similarly, the Philippines could retain a customs threshold even if it decides to abolish the low-value consignment exemption for VAT. This means that the improvements in trade facilitation that resulted from the 2016 increase in the threshold for customs duties can be maintained. The current threshold for customs is still relatively high but, as the average rates are low, the revenue impact is not as significant as it is for VAT. Retaining the customs threshold will also mean that the taxation of gifts will be unaffected by the changes (as VAT only arises when goods and services are being supplied by a business). This is important in the current context, given the numbers of citizens working abroad and sending gifts home to support their families. The special rules for the importation of 'Balikbayan Boxes' can continue to apply and would not be affected by changes to the VAT system, as by definition these boxes are not supplied in the course of a business. However, as part of the process of modernizing customs procedures, it makes sense to collect more data about each individual box in order to detect potential abuse of the system.

Securing Compliance

As the Philippines e-commerce market is dominated by a small number of online marketplaces, it should be possible to discuss compliance directly with them. Experience to date in Australia and in the indirect taxation of digital services suggests that the larger suppliers will engage and comply. Initially, reform can focus on requiring non-resident e-commerce platform operators to register and account for the VAT on products sold through their platforms. However, longer-term, it will still be necessary to establish a compliance regime that includes those foreign suppliers that are not inclined to register to pay VAT on sales to consumers in the Philippines. The regime for registered foreign suppliers can be relatively light touch, probably taking the form of spot checks designed to ensure that the internal systems of the supplier are accurately calculating the VAT dues on sales to consumers in the Philippines. This will release resources currently being used to monitor all packages crossing the border, so that they can focus on those that are being sent by persons who have not registered to account for VAT.

Indirect Taxation of the Digital Economy

The supply of digital goods and services by foreign online suppliers to consumers in the Philippines does not create problems at the border but it still raises issues of indirect taxation. The issues are similar to those raised by sale of physical goods discussed in the previous section. Digital supplies often substitute for physical goods (DVDs, CDs, books, and so on) that would have attracted VAT and there is no reason not to tax the digital versions. As digital goods and services increase in economic importance and value, they need to be part of the VAT base. It is also important to ensure domestic suppliers are not disadvantaged as they will be required to account for VAT on the supplies they make to customers in the Philippines.

This is an issue on which there is a clear international consensus. This consensus and international practice are embodied in the OECD's International VAT/GST Guidelines. These allocate taxing rights under a VAT or GST to the jurisdiction where the final consumption occurs (OECD, 2017a). The International VAT/GST Guidelines have been supplemented by

specific practical advice on the collection of indirect taxes when the supplier of digital goods and services is not located in the territory in which consumption takes place (OECD, 2017b). Almost 65 countries have adopted the Guidelines' recommendations for imposing VAT on the direct supply to consumers of services and intangibles by foreign suppliers, including most OECD and G20 countries (OECD, 2020c). The EU has levied VAT on nonresident suppliers of telecommunications, broadcasting, and electronic services, regardless of scale, since January 1, 2015. More details are available in the Annex to this report but within ASEAN, Singapore announced in its February 2018 budget that GST will be imposed on imported digital services, including the streaming of music and movies and downloaded applications and Malaysia will apply its sales and services tax to imported digital services from January 1, 2020. In April 2020, Indonesia imposed VAT on digital goods and services provided by foreign suppliers, as one element of a package of fiscal measures introduced in response to the COVID-19 crisis.

The approach to securing VAT due on digital goods and services supplied to local consumers by foreign suppliers is essentially the same as for physical goods. Foreign suppliers selling directly to customers are responsible for accounting for the VAT due on those transactions. They register through a simplified process online and account for tax payable on sales to consumers. VAT is not payable in respect of sales to business customers who are registered for VAT. Alternatively, in the more common situation where sales are made through an online marketplace, the marketplace will collect the VAT, unless the vendor can prove that they are registered for VAT in their own right. The marketplace accounts for the VAT to the tax administration and provides data about sellers who have asserted that they are registered for, and paying, VAT on their sales directly. As this is essentially the same process as was described earlier for physical goods, the same online portal can be used for both purposes. Consequently, it makes sense for the Philippines to develop a process of collecting VAT from foreign suppliers that works for both physical and digital goods, drawing on the guidance developed by the OECD. A regional e-commerce toolkit is being developed as part of a joint ADB-OECD-World Bank program and the Philippines would be very welcome to pilot its use.

A Tax Compliance Strategy for Foreign Suppliers

While many large foreign suppliers will comply voluntarily with an obligation to collect Philippine VAT, it will still be necessary to put into place measures to counter non-compliance. The changes to the existing VAT law discussed in the previous section will need to include details of the reporting requirements that foreign suppliers must comply with and, appropriate sanctions for non-compliance. It may be necessary to enhance the powers available to the Bureau of Internal Revenue (BIR) and BOC to gather information from third parties and to exchange information with one another.

The detection of non-compliance will require extensive use of third-party information. For physical goods, data from the main online platforms and potentially from carriers will clearly be important in identifying potentially non-compliant foreign suppliers. This can be followed by action at the border to stop packages originating from those suppliers until import VAT has been accounted for. This will act as an incentive for those foreign suppliers to become compliant in order to secure the free flow of deliveries to their customers. It will be important to integrate the data obtained about these imports into the direct tax compliance strategy. For example, multiple deliveries of similar goods to the same address could be a useful pointer to the existence of an unregistered business.

Foreign suppliers may not have a physical presence in the Philippines, but their interactions with customers who are located there will leave a financial and electronic trail. To identify potentially non-compliant suppliers, BIR will need to access some, or all, of the following sources of data:

• Information from tax returns and audit activity that documents the use by domestic businesses of foreign online suppliers (for example in the form of invoices supporting a deduction in the business' accounts).

• Details of online suppliers registered with other parts of government.

• Information from treaty partners about online suppliers based in their territories.[119]

• Regular scanning of the virtual marketplace to identify foreign suppliers apparently offering services to local consumers that are not registered to pay taxes.

• Information from banks and credit card companies about cross-border payments. Regular patterns of payments to foreign entities that are online suppliers would be an obvious indicator of potential liability. Financial institutions that enable digital payments in the Philippines tend to be large businesses and compliant. Nonetheless, it is important that BIR has the right to obtain information about payments from these institutions, without violating privacy rights. BIR should also have the right to require financial institutions to withhold tax from payments to foreign suppliers in cases where they are non-compliant.

• Information from Internet Service Providers that could identify instances of supply to local consumers. This might entail searches of e-mail content sent or received from a foreign IP address for key words, such as 'invoice', 'receipt', 'service', and so on. Clearly access to this type of data will depend on the relevant privacy laws and information powers that apply in the Philippines and may not be practicable in the near-term. It might be possible to develop an alternative reporting mechanism for ISPs that does not involve any direct review of e-mail content by the tax administration, given the privacy concerns that it could raise.

Digital marketplaces and platforms are themselves useful sources of information about providers of goods and services, both domestic and foreign based. The information they have about businesses using their websites to sell goods and services is highly valuable to tax administrations. The steps some countries have taken to obtain information from multi-sided platforms have already been described. Some tax administrations are requiring digital marketplaces to provide information about the merchants making use of their platforms.[120]

The OECD has now proposed some model rules designed to be part of a systematic international process for collecting and sharing information about sellers using digital platforms to sell services. The purpose of the system is to 'ensure that taxpayers and tax administrations get timely access to high-quality information on the consideration earned by platform sellers, in order to enhance compliance and minimise compliance burdens for tax administrations and taxpayers alike' (OECD, 2020a). The proposed rules are focused on the reporting of income from renting real property and from the provision of personal services in the sharing and gig economy. However, as the consultation document acknowledges, some countries are interested in extending the scope to include the sale of goods via platforms. Although the main focus of the proposal is to enhance the direct tax compliance of sellers, the OECD also expects the data to be of value in securing compliance with other tax obligations, most notably VAT but also local taxes and social security contributions.

It will still be necessary to carry out some checks of physical goods being sent by persons who have not registered to account for VAT. As with checks to ensure compliance with the existing VAT and duty exemptions, it will be important to reduce the opportunities for rent-seeking and corruption that can arise. As part of its ongoing modernization program, the Bureau of Customs will need to ensure strong legal and regulatory framework is in place and continue its efforts to automate Customs processes.

The process of detection will need to be supported by measures designed to punish and deter non-compliance. These can include financial penalties for failing to notify liability, for late filing and late payment and for incorrect declarations. However, as the taxpayers are located outside the country, some additional sanctions may be necessary.[121] The ultimate sanction would be to deny access to the

119 Chapter 4 of the International VAT/GST Guidelines discusses how information exchange under bilateral tax treaties and the Multilateral Convention on Mutual Administrative Assistance in Tax Matters can support effective VAT compliance (the Philippines signed the convention in 2014 but has yet to ratify).

120 For example, Indonesia recently issued regulations requiring digital marketplaces, or "marketplace platforms" as they refer to them, to share monthly transaction information on their merchants' sales data: Regulation of the Minister of Finance No. 210/ PMK.010/2018

121 For example, the UK legislation referenced in Section 4 introduces the concept of joints and several liability, whereby online marketplaces can be held to account for non-compliance by suppliers using their platform.

local market, cutting off the supplier from the customers located there. This would entail blocking access to the supplier's websites and preventing e-mails from the supplier from being delivered. The technical feasibility of such a sanction needs to be confirmed, as does its consistency with Philippine law.

The compliance strategy will need to address the risk that consumers may try to disguise their location from suppliers to avoid the imposition of taxes. It is relatively easy for consumers to mask their IP address, so that they appear to be located outside their home country. Procedures have been developed for determining the actual status of the consumer.[122]

The compliance strategy should include a communication plan. This should be designed to reach the foreign service providers that will be required to account for Philippine VAT. It also needs to be ongoing, as this is a dynamic environment, with new entrants to the market cropping up all the time. Given the nature of the businesses involved, it will need to be web-based with automatic messaging and advertising that is targeted at existing and potential suppliers.

Direct Taxation of the Digital Economy

Some Multinational Enterprises (MNEs) have exploited changes in the way they do business to artificially avoid having a taxable presence in the jurisdictions in which they operate. This issue was addressed directly by Action 7 of the OECD/G20 BEPS project.[123] The issue concerned the way in which 'permanent establishments' are defined in domestic law and in treaties. Some MNEs fragmented their business activities in countries to exploit the specific exemptions included in the standard treaty definition of a permanent establishment or replaced local subsidiaries that acted as distributors with commissionaire arrangements that enabled them to shift profits away from the local jurisdiction. To address this, Action 7 made changes to the permanent establishment definition in the OECD Model Tax Convention. Those changes were then reflected in the Multilateral Instrument that enables its signatories to update their existing network of treaties by way of a single agreement with multiple jurisdictions.[124]

The Philippines tax code does not have an explicit definition of a permanent establishment. Instead the code says that a non-resident alien individual or a foreign corporation that is "engaged in a trade of business in the Philippines" shall be taxable on all sources of income in the Philippines.[125] This appears to be quite a broad charging provision but it is subject to limitation by the tax treaties the Philippines has agreed with other countries. The vast majority of these treaties were negotiated before the BEPS project even began and so do not reflect the changes made to the OECD and UN Model Conventions following Action 7. The Philippines is not a signatory to the Multilateral Convention. Consequently, there is a risk that some MNEs may have adopted the avoidance strategies described in the Action 7 report to artificially avoid a taxable presence in the Philippines. The BIR should undertake an operational review to determine if this is the case. The results of that review can then inform the future direction of the Philippines treaty policy and its view of the potential benefits of signing the Multilateral Instrument.

While there is a consensus about the changes needed to the definition of permanent establishments, the broader direct tax policy questions raised by digitalization of the global economy are still the subject of debate internationally. That debate is currently focused on proposals developed by the OECD/G20 Inclusive Framework on BEPS (IF), which, along with a proposed work program, were presented to G20 Finance Ministers at their meeting in Japan in June 2019 (OECD, 2019b). This proposal has been further refined and the intention is to reach a consensus on the way forward by the end of 2020 (OECD, 2020b). The proposals are designed to address the challenges that the digital economy poses for the existing system of international taxation. This includes the issue of businesses that have "scale without mass". This is shorthand for the way in which some businesses now have a significant digital presence in economies without having any physical, and so taxable, presence there. Annex 1 provides information about ways in which various jurisdictions have responded to the

123 https://www.oecd.org/tax/beps/beps-actions/action7/
124 https://www.oecd.org/tax/beps/beps-actions/action15/#d.en.521955
125 Sections 25 and 28 of the Tax Code.

emergence of new ways of doing business in the digital economy. It includes a slightly more detailed discussion of businesses that have scale without mass and some of the policy responses that have been generated at the national and regional level. One of the reasons for seeking an international consensus on the issue, is that these national initiatives could result in a highly confusing picture internationally and result in double taxation, or even new opportunities for avoidance.

The IF proposals seek to address the challenges of both digitalization and ongoing base erosion. They affect traditional business models as well as highly digitalized businesses. Some of the proposed reforms depart from current standards and are potentially beneficial to developing economies. The IF's willingness to simplify the rules for taxing MNEs and to depart from a strict adherence to the arm's length principle is a noteworthy development. The options under consideration are not mutually exclusive. Some build on existing principles, some break new ground, while others are more obviously anti-avoidance rules. Separately, the IMF has published a paper that explores broader options, including greater use of formulary approaches (IMF, 2019).

In the absence of a consensus on fundamental reform that introduces more mechanical methods, better suited to jurisdictions with limited capacity in their tax administrations, the fallback will be greater reliance on anti-abuse rules. The IF proposals include two such rules: the 'income inclusion rule' and the 'base eroding payment rule' (inspired by elements of the 2017 US tax reform). Both rules are relatively straightforward anti-avoidance measures. They both require tax administrations to have information about the effective tax rates of related parties in other jurisdictions. Under the income inclusion rule, profits of lowly taxed subsidiaries are attributed to the ultimate parent and taxed in the jurisdiction of the parent. This measure is unlikely to directly benefit capital importing economies significantly. The base eroding payment rule would disallow tax deductions for payments to related parties that give rise to a high risk of base erosion (such as interest or royalties) and that are not subject to a minimum effective rate of taxation. Such a rule could be relatively simple to enforce; taxpayers could be required to self-assess whether such payments meet the minimum effective tax test and information required by tax administrations to enforce the rule should be included in a transfer pricing tax return schedule. This would be a useful addition to the anti-avoidance defenses available to jurisdictions but could still be undermined by the use of intermediate entities located in normal-rate countries (a form of treaty shopping that may be hard to combat).

An additional option is to translate the proposed income inclusion proposal into a rule designed to meet the needs of capital importing economies, based on the concept of 'diverted profits'. This would counter profit shifting into low tax jurisdictions, offering a relatively simple tool to bring into taxation a share of profit shifted to lowly-taxed and low-substance entities. It simplifies the vexed issue of what constitutes 'substance' and value creation by substituting (in the case of these lowly-taxed entities) a simple rule for the current complex set of technical considerations. If the profits of a lowly taxed entity exceed a certain multiple of costs representative of 'substance' (primarily the direct costs of labor), that excess shall be allocated to jurisdictions for taxation in accordance with an agreed metric. There is scope to develop a relatively simple approach that is narrowly targeted, mechanical, with wide application (Pemberton and Loeprick, 2019).

If these proposals result in significant simplification of the existing transfer pricing rules that could benefit the Philippines. The Philippines will want to monitor the way in which the work of the IF evolves over the coming months quite closely.

Conclusions and Next Steps

Safeguarding the VAT base and ensuring a level-playing field between foreign and domestic sellers are vital. The analysis in this chapter suggests that e-commerce does pose a threat to the VAT base in the Philippines. Moreover, not securing VAT on digital goods and services supplied to local consumers by foreign suppliers will disadvantage local suppliers who are required to secure VAT on their sales. Fortunately, international experience shows that there is a solution, which requires foreign suppliers to register and pay VAT when

they sell goods and services to consumers in the Philippines. It is accepted internationally that VAT should be payable in the country of consumption, in line with the destination principle. The process for collecting the VAT due already operates successfully in many countries. A single portal can be used by foreign suppliers to account for VAT due on physical goods and digital services provided to consumers in the Philippines. The Philippines could pilot the use of the e-commerce toolkit being developed as part of a joint ADB-OECD-World Bank program.

An immediate next step will be to obtain more precise data about the scale of the problem. This will also allow the Department of Finance to assess the tax revenue being lost as a result of the current low value consignment exemption from VAT and the potential yield from its reduction, or abolition. The data should also help verify the main foreign suppliers.

Separately, the Department of Finance should see what data is available about the consumption of digital services by consumers in the Philippines. There may be data available in other parts of Government, but it may also be necessary to enter into dialogue with the industry to assess the scale of the market and future trends. That could be part of an overall consultation about changes to the VAT treatment of imports.

At the same time, the Department of Finance will want to consider how the legislative models identified in this chapter can be translated into provision in the Philippine Tax Code. This report also discussed a high-level compliance strategy to support the policy changes, and BIR and BOC will want to consider how that can be best integrated into their current operations. The data on the scale of the problem, coupled with an appreciation of how international practice can be translated into local legislation, can be used to model the operational impacts on BIR and BOC. This will enable an overall cost-benefit appraisal of the reform options.

Separately, BIR should conduct an exercise to establish whether the Philippines is subject to the kind of tax avoidance addressed by BEPS Action 7. The results of this exercise can inform the development of the tax treaty policy of the Philippines and its judgment about the value of becoming a signatory to the Multilateral Instrument that resulted from BEPS Action 15.

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CHAPTER 6

A CONDUCIVE AND COMPETITIVE BUSINESS ENVIRONMENT

The ability of the private sector to be part of the digital economy requires a conducive and competitive business environment. In addition to good connectivity and digital payments, a conducive and competitive business environment attracts private sector investment and innovations to the digital economy. Without competitive pressure, market leaders have little incentive to invest in technologies new to the firm since they do not face competitive pressures to reduce their costs—while laggard firms are too far away from the frontier to bridge the cost gaps and enter the market (World Bank, 2016). Those that do enter the market may instead use old production technologies and focus on local market niches to survive.

The current business environment limits the ability of the economy to generate new private sector firms, which will affect the ability of the economy to recover during the COVID-19 crisis. New firms are typically responsible for most nations' net job growth. However, in 2016, only 300 new firms were registered per 1 million in the working-age population, compared to Thailand with 1,000 and Malaysia with 2,300. Entrepreneurs are largely discouraged by the administrative burdens placed on startups, together with the complexity of regulatory procedures, and the regulatory protection of incumbents.

Most startups are in Manila but there is an increasing concentration of startup firms in Cebu. The 2019 Startup Ecosystem Rankings identified Manila and Cebu as the top startup ecosystems in the Philippines. In 2019, the global ranking of both cities is at 84 and 293, respectively. Identifying the constraints faced by startups can provide good insights on the possible gaps in the startup ecosystem, which will be key to bring technologies that facilitate social distancing in the new normal.

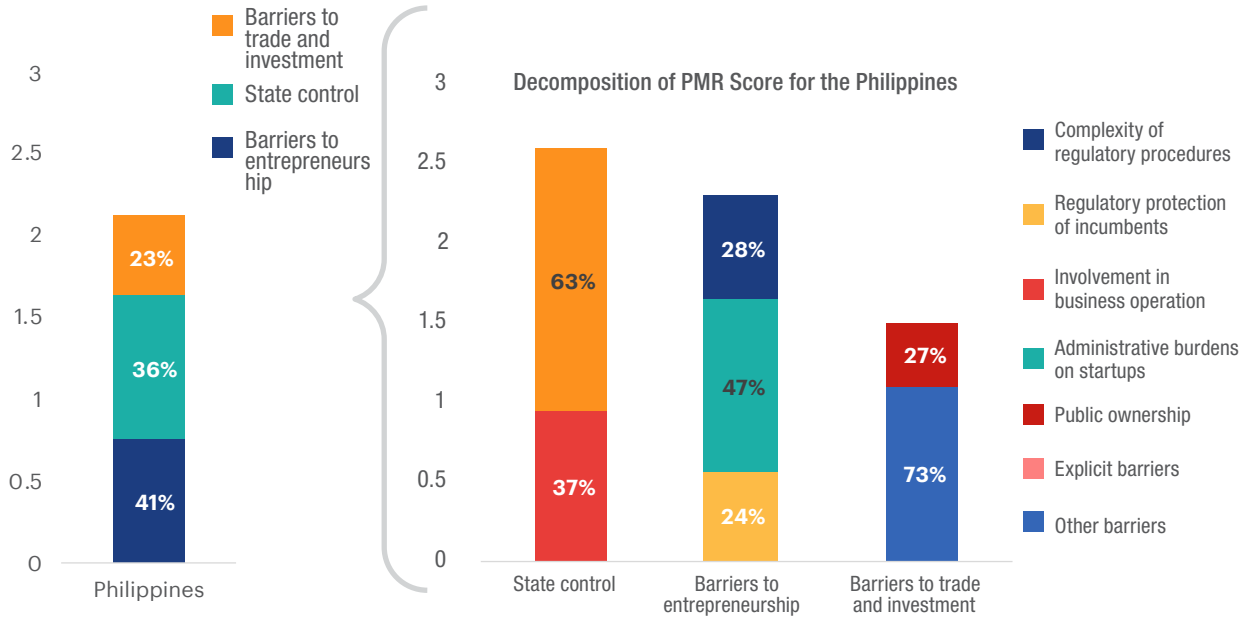
Competition and regulatory constraints[126]

Limited competition in key economic sectors is one of the main development challenges for the digital economy. A notable proportion of markets enjoy high price cost margins, which may be an indication of limitations to competition. Price cost margins (PCMs) provide a way to measure competition as a proxy of the ability of firms to raise prices above marginal costs. In this case, more than 70 percent of agriculture markets, 60 percent of manufacturing markets, 80 percent of wholesale/retail markets, and 90 percent of transport/storage markets have an average PCM[127] of more than 40 percent. The ability to charge prices above marginal costs is a potential indicator of the exercise of market power by firms. In some cases, such outcomes can be facilitated by market rules and regulations such as price controls.

Private sector markets face several anti-competitive restrictions. Product market regulation (PMR) indicators provide an assessment of the extent to which public policies promote or inhibit market forces in several areas of product markets. For the Philippines, the PMR identifies numerous anti-competitive restrictions in terms of regulatory protection of incumbents, public ownership of firms in competitive sectors and the administrative burdens on start-ups (Figure 6.1). These restrictions include barriers to foreign investments in utilities, price controls on more than 40 products deemed as staples, and cumbersome registration procedures for corporations that may discourage entry.

126 This section largely draws from the World Bank's (2018a) report on Fostering Competition in the Philippines: The Challenge of Restrictive Regulations.
127 Price cost margins calculated taking into account direct costs of sales and labor costs.

Figure 6.1. Anti-competitive restrictions create multiple private sector barriers

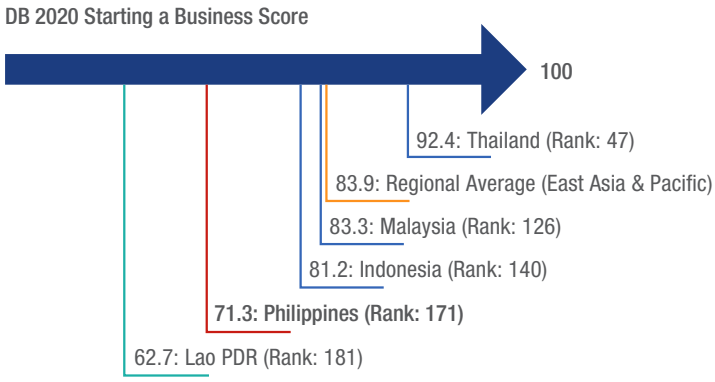


Source: World Bank (2018a), The Philippines PMR questionnaire

High administrative burdens on start-ups make it costly for startups. In 2020, the Philippines ranked 171 out of 190 economies in Starting a Business (Figure 6.2). It takes 33 days and 13 procedures to start a business, way above the East Asian average. In addition, for many industries, numerous operating permits and licenses are required from unrelated agencies that need to be renewed on an annual basis. For example, companies operating in the logistics sector may be required to secure the necessary permits from the Maritime Industry Authority for their shipping assets, from the Land Transportation Franchising and Regulatory Board for their trucks, client profile registry from the Bureau of Customs, and a sea freight forwarding accreditation from the Fair Trade and Enforcement Bureau. These are in addition to permits paid to local entities, such as the Mayor's Business Permit; permits for passage from local government units, economic zones, and ports, and which must be renewed annually. Nevertheless, the government is working on the implementation of the Innovation Start up Act guidelines for the Startup Business One Stop Shop (SBOSS) to address the administrative burdens for startups.

With the passage of the Philippine Competition Act in 2015, the government has taken the first step in minimizing competition constraints by creating the Philippine Competition Commission (PCC) an independent quasi-judicial body to promote and maintain market competition by regulating anti-competitive conduct. After a two-year transition period, the law is now fully operational. The PCC is fully staffed, having completed the secondary regulations for the Competition Act, and internal procedures for the review of mergers and the enforcement of anti-cartel behavior are in place. Between February 2016 to August 2018, the Commission conducted 146 reviews of merger transactions worth PHP 2.4 trillion and has completed seven preliminary inquiries on anti-cartel behavior. However, the PCC has yet to complete an enforcement ruling on companies engaged in anti-competitive behavior.

Figure 6.2. It's less bureaucratically fun to start a company in the Philippines



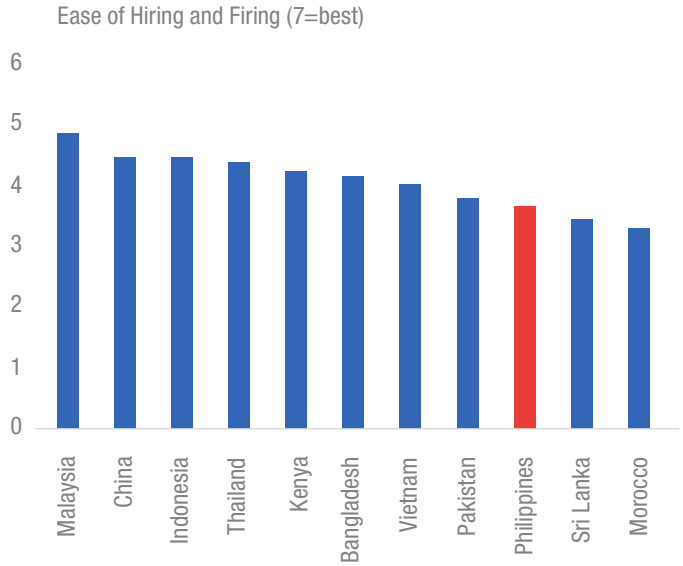
Source: World Bank (2018a), The Philippines PMR questionnaire

The country has been working towards reforming its business regulatory and licensing environment. In May 2018, the Philippines passed the Ease of Doing Business and Efficient Government Service Delivery Act. Among the provisions of the law are the automatic approval of applications beyond the prescribed processing time of between three and 20 days (depending on complexity); the promotion of automated procedures and electronic licenses; and the imposition of administrative and criminal penalties for non-compliance. The law mandates the creation of an Anti-Red-Tape Authority (ARTA), an oversight regulatory body directly under the Office of the President, which has a main task of implementing the law to reduce the regulatory burdens of the private sector to comply with business regulations.

Labor Market[128]

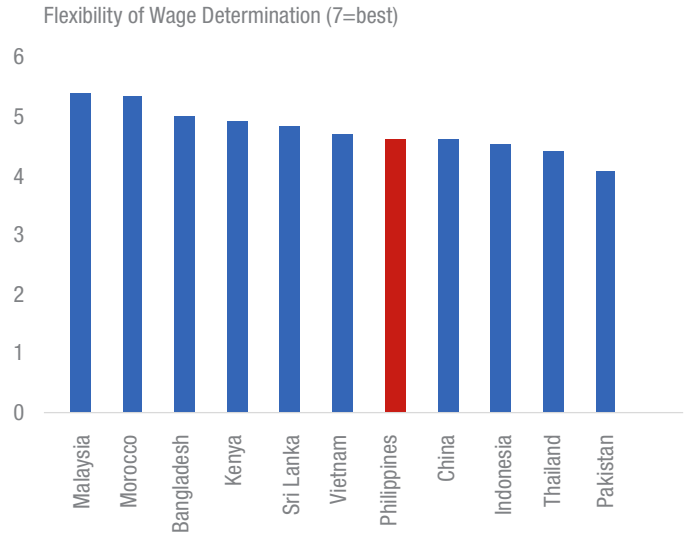
Labor regulations in the Philippines are one of the most stringent in the ASEAN region, limiting the creation of formal jobs, and the flexibility that might be required during the COVID-19 recovery. According to the Global Competitiveness Report 2017–2018, the Philippines ranks 84 out of 137 countries in terms of labor market efficiency and 77 on the ease of hiring and firing workers, more restrictive than in peers (Figure 6.3). The strict labor regulations contribute to informality by increasing the cost of formal compared to informal, discourages employers from hiring workers formally and leads them to increasingly use temporary employment contracts. Moreover, wage determination is restrictive both relative to Filipino worker productivity and to the minimum wage of other countries with similar income levels (Figure 6.4) (Betcherman, 2014). Finally, redundancy costs are very high in the Philippines—27 weeks of salary, resulting in a rank of 118 out of 136 countries.

Figure 6.3. Labor regulations in the Philippines are more restrictive than in peers



Source: World Bank (2018b).

Figure 6.4. Wage determination is also more restrictive in the Philippines compared with peers



Source: World Bank (2018b).

Skills

To be able to ride the waves of digital transformation, employers and workers need to know how to use digital technology, handle large volumes of information, and act with flexibility and creativity. While more productive firms tend to access the internet and use it more intensively, the successful use of digital technologies depends on firms' complementary investments in skills and organizational restructuring. This entails

122 Largely draws from World Bank's (2018b) Philippines Growth and Productivity Report.

that workers and entrepreneurs would need to possess foundational skills in addition to technical ICT skills. To maximize the potential benefits of the digital economy, three sets of skills are required: (1) cognitive, such as problem-solving and mental speed; (2) social and behavioral, such as socioemotional skills, decision-making ability, and interpersonal skills; and (3) technical, such as the use of various software, methods, materials, and tools (Figure 6.5). Moreover, digital technologies perform routine tasks more quickly and less costly than humans. As a result, the demand for low-skill jobs declines and the need for high-skill workers that complement these technologies increases. This, in turn, motivates people to continuously learn new skills and upgrade existing one through a lifelong process of learning.

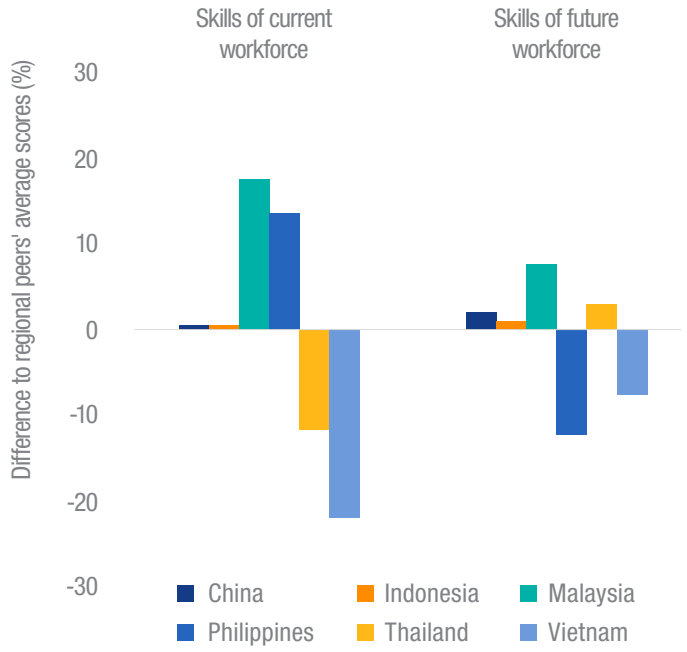
Figure 6.5. The skills needed to operate in the digital economy go beyond ICT technical skills

Source: World Bank (2016).

Filipino children born today will reach just over half of their maximum potential productivity upon adulthood, which indicates that cognitive skills might be underdeveloped. Findings from the World Bank's (2018c) Human Capital Index (HCI) can be used to demonstrate the potential effect of early childhood interventions on these skills. The HCI measures the amount of productivity that a child born today can expect to attain by age 18, given the current levels of education and health prevailing in the country he or she resides in. The Philippines has a human capital index of 0.55, which indicates that the future productivity of a child born today is 45 percent lower than what they could have achieved with complete education and full health. Both Malaysia and Thailand have higher HCIs, at 0.622 and 0.604, respectively. The Philippines performs slightly better than Indonesia, which has an HCI of 0.535. These low results can be partially attributed to the low learning-adjusted years of schooling. While Filipino children could expect to be in school for 12.8 years by the time they are 18, the learning-adjusted years are much lower at 8.37 years.

The skills needed for a more digital future are therefore below average. The WEF's (2016) Competitiveness report differentiates the skills of the current workforce with those needed for the future (Figure 6.6). Current workforce skills cover years of schooling, extent of staff training, quality of vocational training, skill sets of secondary education graduates, and skill sets of university graduates. In comparison, future workforce skills cover school life expectancy, quality of primary education, internet use in schools, and critical thinking in teaching. Using the skills of the current workforce, the Philippines is above regional peers' average; however, in terms of the skills for the future workforce, the Philippines lags behind neighboring China and Malaysia.

Figure 6.6. The skills of today are above average, but not fully ready for the future



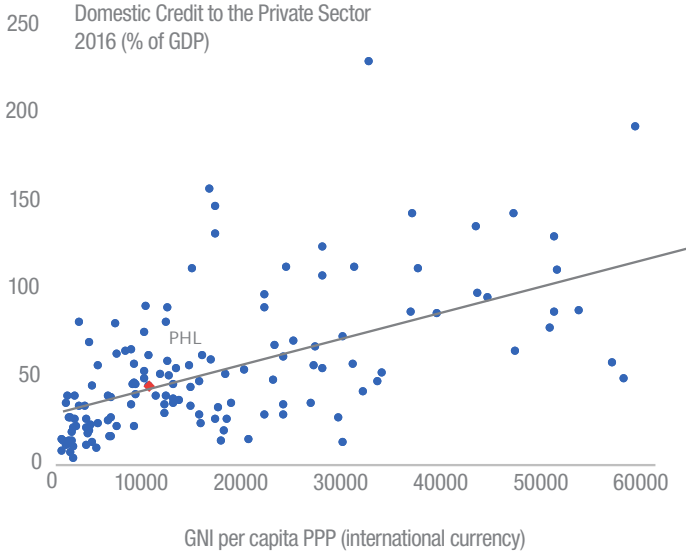
Source: WEF (2019).

Despite the availability of institutions that offer ICT training, there is still a need to update school curriculums and traditional modes of teaching. The country's top-ranking universities, including the University of the Philippines, Ateneo de Manila University, De La Salle University, and University of Santo Tomas, all offer degrees related to information technology and computer sciences. The UP System Information Technology Foundation offers individual IT courses open to professionals who do not have an IT background, and IT majors who want to brush up on their skills. The foundation also has a program called 'TBC4K: Tech Boot Camp for Kids + Teens', which aims to introduce children to IT courses such as robotics and programming. However, qualitative interviews with ICT firms reveal that there is a mismatch between technical skills taught in classrooms and the skills needed in the workplace. As a result, firms would resort to hiring IT professionals from abroad or investing in extensive trainings for new hires, including those who graduated with an ICT-related degree.[129]

Access to Finance, including start-up finance

The level of domestic credit to the private sector is low compared to regional peers with firms relying heavily on internal funds. At 45 percent of GDP, credit to the private sector is at the level predicted by its income level (Figure 6.7), but substantially lower than the average of regional peers (114 percent of GDP) (Figure 6.8). Less than 7 percent of working capital of the country's firms is financed by banks, much lower than the 18 percent among firms in regional peers. Even for the country's large firms, only 11.6 percent of funds used for investment originates from banks. However, most Philippine firms that apply for a loan through the banking system are approved. Based on enterprise survey data from 2015, while a third of the SMEs in the sample have existing lines of credit, few have applied for new lines of credit. Aside for not finding a need for it, SMEs cite high interest rates, complex application procedure and high collateral as the main reasons for not applying to a new line of credit. Banks cite insufficient or unacceptable collateral and adverse credit/repayment record as the main reasons for rejection (Aldaba, 2011). Rather than access, this heavy reliance on internal funds seems to be the result of either high costs in the formal banking system or firm preferences. The effectiveness of any COVID-19 support provided to the private sector as lines of credit will likely be restricted by the current low level of borrowing, especially for working capital.

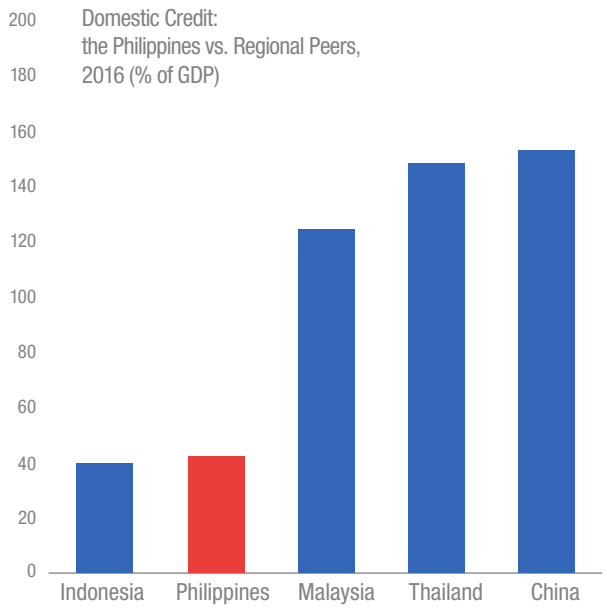
Figure 6.7. The level of domestic credit to the private sector is adequate relative to the country's income level…



Source: World Bank (2018).

129 The DTI is conducting reskilling and upskilling of workforce, signing two MOUs partnering with TESDA and Skills Future SG for Human Capital Development. Moreover, DTI, DOLE, and TESDA are cooperating on innovation initiatives for human resource development, reskilling, and upskilling of workforce in the context of the Fourth Industrial Revolution.

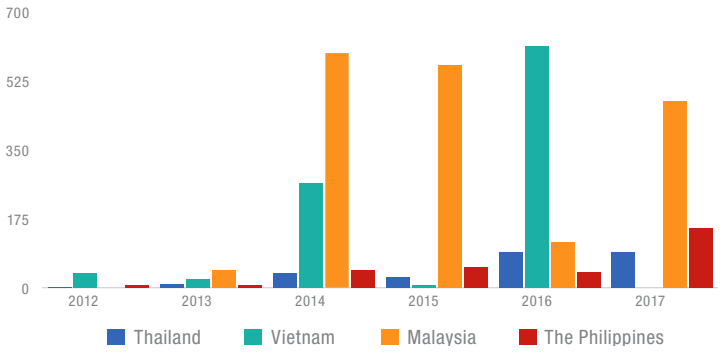
Figure 6.8. …but relatively low compared with regional peers



Source: World Bank (2018).

The access to finance constraint is especially acute among early stage entrepreneurs. The 2020 Philippine Startup Survey (PWC, 2020) shows that access to finance is one of the biggest challenges facing startups in the Philippines, with 77 percent of founders naming it as their top challenge to doing business. The disparity of early stage funding per startup is stark: US$68,000 in the Philippines compared to a global average of US$252,000 (Startup Genome, 2018). Also, deal tracking from Golden Gate Ventures between 2012 and 2017 showed that the Philippines covered less than 5 percent of the total in the region, with roughly US$300 million in funding over the past five years (Figure 6.9).

Figure 6.9. Venture capital deals in the Southeast Asian region, 2012-2017



Source: Golden Gate Ventures deal tracking

Investors are beginning to gravitate towards the Philippines as an important emerging market destination. Looking forward, 45 percent of investors see Fintech as the top sector that will be successful in the next two years (PwC, 2020). The Philippines' strong economic potential and large population makes it an attractive market for Venture Capital and Private Equity (VCPE) investors (Table 6.1). According to the latest VCPE Country Attractiveness Index,[130] the Philippines ranks 42 out of 125 countries. Moreover, the country has gained three positions since 2014. Venture Capital and Private Equity (VCPE) index measures the attractiveness of countries for investors in the venture capital (VC) and private equity (PE) asset classes. It provides the most up-to-date aggregated information on the quality of the investment environment and an assessment of the ease of transaction-making in 125 countries. According to the 2018 VCPE Country Attractiveness Index, Philippines ranked in the middle when compared to its regional and structural peers.

Table 6.1. VCPE Country Attractiveness Index*

Country	Rank	Score
Malaysia	13	83.1
China	18	80.7
Thailand	27	72.2
Indonesia	37	64.3
Philippines	42	61.3
Vietnam	43	60.7
Kenya	53	57.6
Sri Lanka	55	57.3
Pakistan	63	53.2
Morocco	64	52.9

Source: Groh et al. (2018)
*Covers 125 countries.

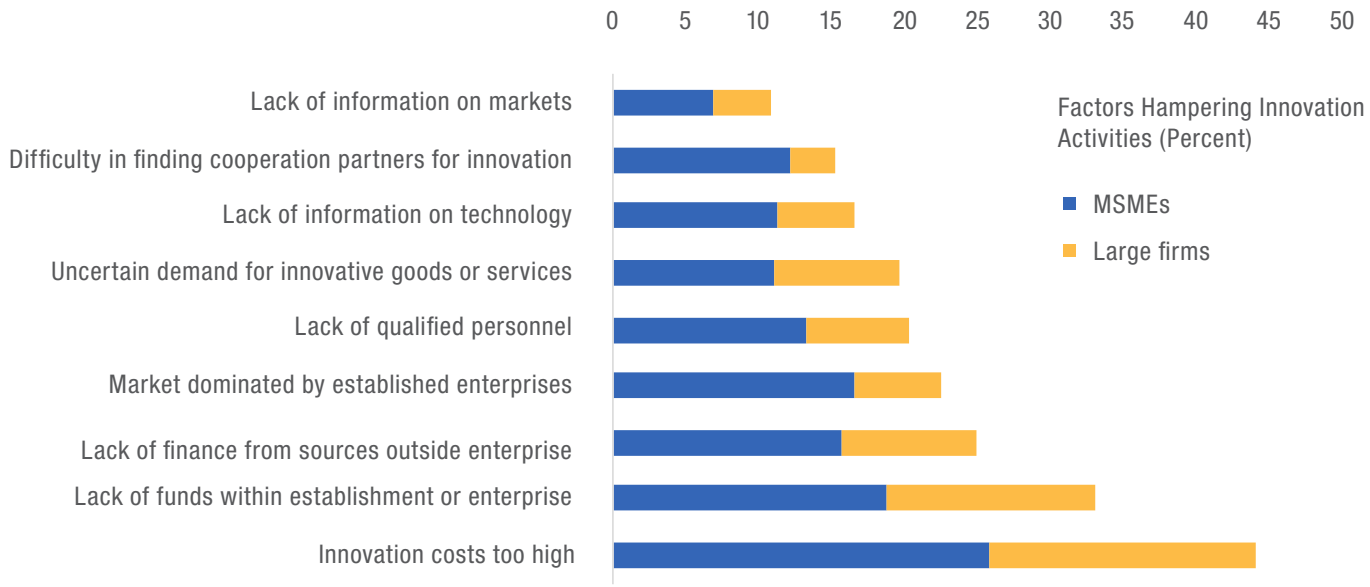
130 The index measures the attractiveness of countries for investors in the venture capital (VC) and private equity (PE) asset classes. It provides the most up-to-date aggregated information on the quality of the investment environment and an assessment of the ease of transaction-making in 125 countries. Refer to Groh et al. (2018).

Innovation and internal firm constraints

Philippine firms are generally improving on their innovation capabilities, but still lag behind firms in peer countries. Internal firm factors relate to entrepreneurial and managerial capabilities and technology adoption/ innovation which are considered central for raising productivity. Weak firm capacity to innovate limits the ability of firms to respond to the challenges presented by society, such as moving to online platforms are offer digital payments to respond to COVID-19. Productivity growth is influenced by the capabilities and incentives of firms to innovate. Entrepreneurship and innovation at firm level requires enhancing firm capabilities for innovation and technology learning that in turn affects productivity growth. Technological learning at the firm level implies an increased ability for firms to absorb these effectively and thus the need to invest in a firms' absorptive capacity. According to the Global Innovation Index Report - that ranks innovation capabilities across world economies – Philippines is pegged 50 out of 131 countries, behind Singapore (8), China (14), Malaysia (33), and Vietnam (42) but above Indonesia (85) (Cornell University, INSEAD, and WIPO, 2020). The country has been improving in rankings but Philippine firms are still less likely to adopt existing technologies than firms in peer countries. For instance, only 9 percent of firms in the Philippines have internationally recognized quality certifications and only 11.2 percent of firms use technology licensed from foreign companies, lower than in most peers.

Addressing the high cost of innovation, insufficient resources, market dominance, and lack of skills will help firms innovate (Figure 6.10). Firms within the Philippines point to the high cost of innovation as the primary factor that prevents them from engaging in innovation activities in the country, followed by lack of funds from within firms and external sources. Moreover, market dominance and lack of qualified personnel are also important factors that discourage innovation, especially among micro, small, and medium enterprises (MSMEs).

Figure 6.10. Constraints to Innovation activities – MSMEs vs. large firms



A conducive environment needs to minimize the inherent risks of a digital world. Issues such as hacking, misuse of private information, personal security breaches, and unsafe access deter producers and consumers from embracing digital solutions. Therefore, it is crucial to establish and implement regulations that build trust and protect consumers from risks in the digital markets.

Electronic transactions

Electronic documents and signatures are legally recognized in the Philippines, but the law that authorizes it needs to be updated. The Electronic Commerce Act was signed into law 20 years ago. By virtue of this law, documents and signatures in electronic form are treated as the legal and functional equivalent of paper-based documents. However, when a notarized document is required by law, the document cannot use digital signatures (for example, tax returns, corporate documents submitted to the Securities and Exchange Commission). Furthermore, many application processes have practices that still require the submission of paper-based documents.

Consumer protection

Regulations that enforce consumer protection are essential in digital markets. Traditional transactions such as physical shopping involve a simultaneous exchange of goods where interactions in a physical market permit the consumer to test the seller's professionalism as well as the quality of the product. However, in online transactions, consumers would have to make decisions based on the information given by the seller without the usual 'physical and visual cues' that aid them in decision-making. As such, regulations play a key role in ensuring that consumers are provided with the following: complete information to make sound decisions, protection against hazardous products and unfair sales practices, and the right to redress.

The Philippines has policies related to consumer protection, but only a few explicitly cover digital transactions. Consumer protection in the Philippines is covered by the Consumer Act of 1992, which incorporates standard guidelines on consumer protection but lacks provisions on e-commerce transactions. Consumer protection joint circulars for e-commerce have been released by DTI, DA, and DOH, which mandate minimum requirements that e-commerce sites must comply with (for example, privacy policy, information about products and services). The BSP also issued Circular No. 542 in 2006 to provide consumer awareness programs for security risks relating to e-banking products and services. In terms of filing reports, DTI requires those to be done in person. However, since transactions are conducted online, parties could be from different provinces, making the arrangement difficult to implement.

Privacy and data protection

Lack of trust on how personal data is kept and managed makes consumers reluctant in engaging in electronic transactions, lowering activity and limiting growth in digital markets. Moreover, excessive regulations on the use and processing of data can be expensive for businesses that analyze consumer information for their operations. The objective therefore is to allow information transfers that support the growth of digital markets while building consumer trust by guaranteeing that their personal data is secure and under their control.

The Philippines recently implemented a data privacy legal framework. The Data Privacy Act was signed into law in 2012, and the implementing rules and regulations issued in 2016. The law aims to protect the human right to privacy while ensuring free flow of information to promote innovation and growth. The rights protected by the law include the following: the right to be informed when personal data will be collected and processed, the right to access any information held by the organization relating to one's personal data, the right to object or withhold consent in the collection or process of personal data, and the right to order destruction of personal data, among others.

Cybersecurity

With greater use of digital technologies and collection of personal data, the need for

a legislation that enforces cybersecurity increases. In the Philippines, the Cybercrime Prevention Act of 2012 penalizes offenses such as illegal computer or system access, identity theft, and credit card fraud, among many others. Law enforcement of the provisions of the act are carried out by the cybercrime units of the National Bureau of Investigation (NBI) and the Philippine National Police (PNP). Nonetheless, based on Kaspersky, the Philippines was the 7th most attacked country in the world by cyber threats during the last quarter of 2019.

Intellectual Property Rights

Strongly enforced intellectual property (IP) rights encourage firm innovation and increase consumer confidence in the digital economy. Advancements in digital technology have dramatically improved the ability to reproduce and distribute information. On the one hand, these advances enable firms to offer their products to a broader market at a faster and cheaper rate. On the other hand, the same technology allows unauthorized individuals to easily distribute illegal copies of these products. The enforcement of IP rights is therefore necessary to guarantee firms that they would be able to reap the benefits of their creations and innovations, and fairly compete with other firms.

The Philippines has demonstrated significant development in intellectual property rights protection in recent years. It improved by about 4 percentage points in the United States Chamber of Commerce's (USCC, 2020) International Intellectual Property Index, and is ranked 37 out of 53 countries. The USSC identifies the provision of basic IP rights through the Intellectual Property (IP) Code of the Philippines as one of the country's key strengths. Another strong point is the enactment of RA 10372 in 2012 that brought amendments to the IP code, which granted enforcement powers to the Intellectual Property Office of the Philippines (IPOPHL), and strengthened criminal sanctions. However, the country still has a lot to work on as online and software piracy remain rampant, and barriers for licensing and technology transfer continue to disincentivize firm innovation. On the bright side, greater development in IP protection is expected in the future given two pending legislations. House Bill 9148 or the New IP Act intends to give IPOPHL the power to issue notice-and-takedown orders to address online piracy and counterfeiting. It also enables copyright owners to claim damages from infringing sites and grant them ownership of the domain name of the infringing site. Senate Bill 497 or the Philippine Online Infringing Act grants IPOPHL the authority to order the cancellation of an internet service provider's (ISP) operating license should the ISP fail to remove infringing content within 10 days from receiving a notification.

Policy Recommendations

There are multiple constraints that hinder productivity growth and digital entrepreneurship in the Philippines. The external constraints that deter firms from joining and operating in the digital economy include the high costs of doing business and establishing a new business; regulatory barriers that dampen market conditions; high trade (Chapter 4) and connectivity costs (Chapter 2); and other distortions in labor regulations. There are also missing or weak complementarities in the area of finance and skills. Lastly, internal firm factors –which include weak internal capabilities, and a dearth of human capital and skills – discourage innovation and technology adoption prospects. Remedial measures call for a combination of policy reforms and strengthening of firm support. Those should be aimed at improving the operating environment of the firms (that is, by resolving market failures, removing distortions) and within-firm performance (that is, by building skills and managerial capabilities, technology adoption), as well as entry of new firms.

Improving competition to allow new business to enter the market will be key to allow the economy to recover and generate the much-needed jobs. New businesses will be key in creating new jobs during the COVID-19 recovery as many firms would have exited and market, and most net job creation comes from new firms. However, firm birth rates are low in the Philippines as entrepreneurs are discouraged

by complex regulations, including those that protect incumbents. In this context, the implementation of the recently enacted Ease of Doing Business Act could improve competition by streamlining and automating all government permit processes and extending their validity beyond one year. This would reduce the cost of doing business and facilitate social distancing. Increasing competition will also require the PCC to complete enforcement rulings on companies engaged in anti-competitive behavior to increase market competition.

Introducing and regulating the standards of services provided through platforms. Since the development of the digital economy, the sharing economy has gone through a spontaneous deregulation process (Edelman and Geradin, 2016), with some service providers offering lower standards that those offline, at the expense of consumers. Therefore, there is a need to carefully regulate standards (e.g. quality, health, safety) in the provision of services through digital platforms, especially during the COVID-19 pandemic.

The skills of the future workforce can be improved by fostering socioemotional skills and preparing for digital education and remote learning. A first step is to embed socioemotional skills in the curricula of the extended compulsory education from kindergarten to grade 12 by explicitly stating objectives and targets and by preparing the teachers for effective delivery of content[131]. Moreover, COVID-19 has highlighted the importance of remote options to ensure the continuity of learning. Therefore, the government should prepare teachers and school leaders for multiple learning delivery modalities and learning resources, including minimum standards of digital literacy and remote learning capabilities. Lastly, encourage university and industry linkages to improve the curriculum relevance in STEM (science, technology, engineering, mathematics) disciplines.

Investments in human capital must be complemented by increased access to finance, especially at the growth stage, by making the country's regulatory environment friendlier to investment and encouraging venture capital firms to reside and specialize in the country. The government can solve problems particular to digital entrepreneurship by providing incentives for digital payments and promoting transparency and open data through a right to information law. Ultimately, more space needs to be made for the private sector to thrive if digital entrepreneurship is going to meet its promise of assisting firms to transition to the new normal, and ultimately to make the Philippines a high-income nation.

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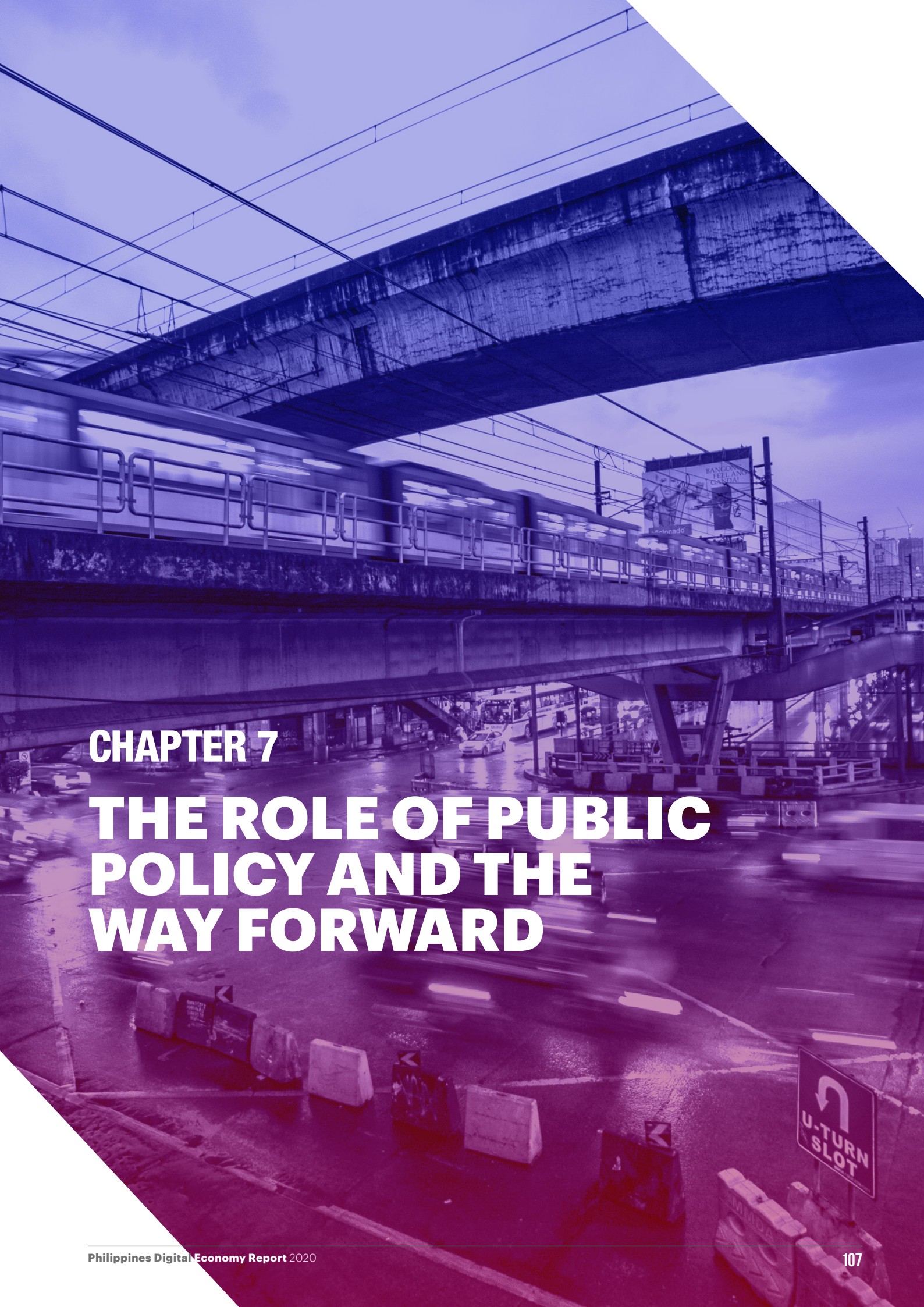


CHAPTER 7

THE ROLE OF PUBLIC POLICY AND THE WAY FORWARD

Digital technologies will be vital aspects for the economy to operate and grow during the 'new normal'. To contain the spread of the virus and buy time for recovery, the Philippine government has enforced measures that restrict mobility, regulate physical contact, and limit business activity. These constraints initiated a transformational shift from analog practices, which often require mobility and physical contact, to digital modes of operating and transacting, which are more efficient and demand fewer face-to-face interactions. Since the quarantine was implemented, online sales of goods and services, digital payments and transactions, and the use of online communication platforms have rapidly increased. This change in consumer behavior and firm operations will likely carry on during the 'new normal' as social distancing guidelines and hygiene protocols are expected to be enforced even after the quarantine is lifted. To take full advantage of this situation and to help the economy in recovering from the losses it has suffered due to the lockdown, the government must ramp up its efforts in accelerating digitalization in the economy. In the long term, public policies to increase the adoption of digital technologies will help the Philippines to make development more inclusive, efficient, and innovative; allowing the country to leapfrog toward its Ambisyon Natin 2040 dream.

The digital economy can take root and grow anywhere if some elements are in place, but especially if government policies and regulations shape growth in the right direction. Facilitating the dividends of growth, jobs, and services requires government policy to set up a sound regulatory environment and promote digital adoption. As previously covered, the foundation of the digital economy requires a competitive environment that leads to the provision of fast, reliable, and affordable internet (Chapter 2). Accessing the digital economy also requires policies that promote the use of digital finance (Chapter 3), which can be largely facilitated through a national digital ID. In addition, the analog complements that include a conducive and competitive business climate (Chapter 4 and 6). The resulting ecosystem would allow new companies to enter the market and create the much-needed jobs and facilitate the digitization of existing firms to respond to the new normal.

Leading by example

In the society-wide digital transformation needed to respond to the new normal, the government itself must lead by example. Given the high demand for social distancing, the government can serve as an example by taking the lead in fast-tracking their e-governance projects. The paragraphs below identify areas that can showcase the government's commitment to a digitally transformed society, together with examples of launched and ongoing initiatives.

A key step is for government to digitize its processes to make policy more efficient and promote social distancing. The usage of digital technologies in government processes can make the government more efficient and transparent. Below are examples of ongoing initiatives, which have started to digitize processes, but are yet to be fully implemented.

- In 2019, the Bureau of Customs (BOC) launched a total of six information systems, which are designed to streamline customs processes, increase transparency, and mitigate corruption (BOC, 2019a). The Document Tracking System, for example, enables the public to view and monitor the status of documents received by the BOC online (BOC, 2019b). However, a large bulk of the processes in the BOC remains paper-based. Informal entry (below Php 50,000) transactions are still processed manually, while formal importers are still required to submit paper documents.

- In terms of international trade, the government is planning to set up a national single window (NSW). The NSW will enable traders to apply for their permits online and allow regulatory agencies to send feedback in real-time.

- The DTI and the Securities and Exchange Commission (SEC) have rolled out online business registration systems, but much of the remaining procedures in starting a business in the country are still manually executed. In 2017, the DICT started the Integrated Business Permits and Licensing System (iBPLS) project, which provides Local Government Units across the country with a software that digitizes the application of business permit and licenses (DICT, 2019).

Issuing a Digital ID. A digital ID system promotes inclusivity, improves efficiency, and enhances security. In line with the Philippine Identification Systems (PhilSys) Act of 2018, the country will issue a national ID using a biometric recognition and privacy-by-design technologies. With a national ID, unbanked Filipinos will have a proof of identity, which is a key requirement in opening a bank account or a mobile money account. It also addresses the difficulties in obtaining documentation, which usually require two government-issued IDs as a proof of identity. Moreover, the use of biometrics in a digital ID allows easier verification of the authenticity of a person's declared identity, including for online transactions, making it especially useful in digital transactions such as the COVID-19 emergency subsidies to 4Ps beneficiaries.

Providing and accepting digital payments for government transactions. Providing citizens and firms the option to pay taxes and receive salaries through digital means can reduce the time people spend traveling for this purpose and promote social distancing. In addition, this encourages citizens to participate in the digital economy. For example, the Bureau of Internal Revenue (BIR) accepts tax returns via electronic channels such as the BIR's Electronic Filing and Payment System, Gcash, Development Bank of the Philippines, Land Bank, Union Bank, PayMaya, and PESONet (Padin, 2020). Moreover, mobile intermediated Government to Person payments offer the opportunity to encourage uptake of mobile services by women. Digital banking is viewed as an effective way to address constraints commonly faced by women, low-income and rural segments, such as pecuniary and non-pecuniary transactions costs, regulatory barriers, information and knowledge gaps, social constraints and behavioral biases (World Bank EAP Gender Innovation Lab).

Facilitating digital payments for most Pantawid beneficiaries. The Bangko Sentral ng Pilipinas has created an enabling environment for the use of digital payments for G2P payments by issuing a memorandum allowing financial institutions to apply reduced customer identification requirements for account opening. For existing Pantawid beneficiaries, the majority have cash cards issued by the Landbank (LBP). The LBP cash card has been able to facilitate digital payments for most Pantawid beneficiaries. However, new social amelioration program beneficiaries, have relied on house-to-house cash delivery or collection of cash at pay-out points.

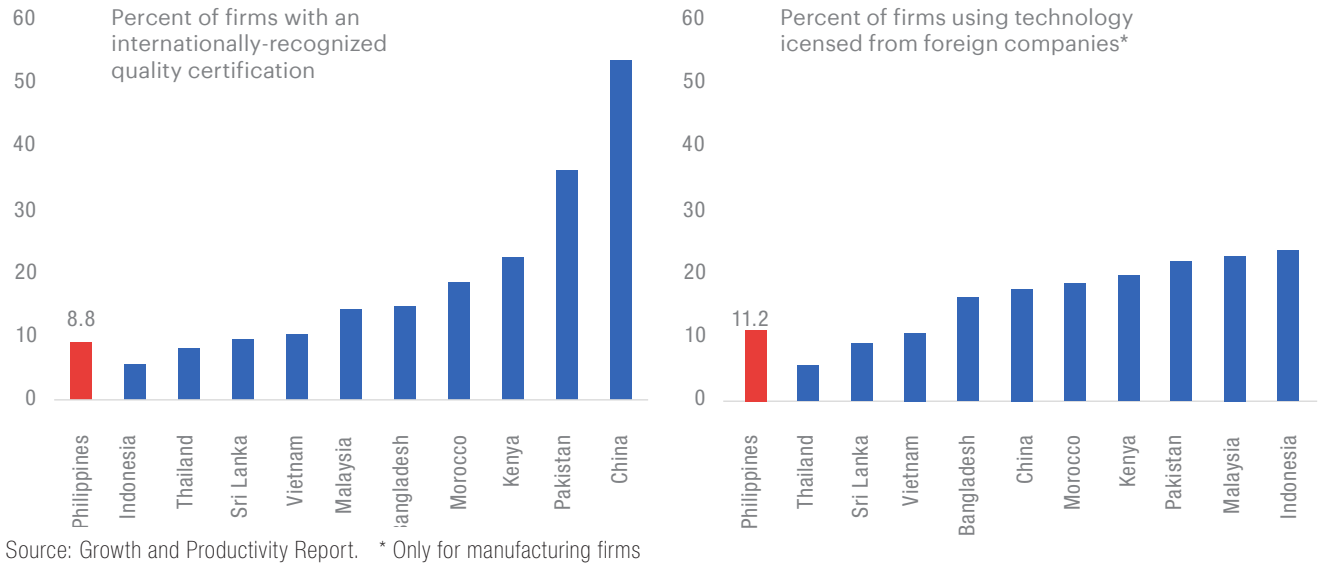
Delivering learning opportunities using multiple digital modalities. DepEd's online platform, Commons, already exists but needs to enhance its contents and quality. Moreover, access to Commons is still limited as almost 45 percent of the population, and 74 percent (34,500) of public schools did not have access to the Internet in 2018. In addition to Commons, DepEd plans to use educational television programs as a core modality and build on the existing programs that it has developed in partnership with a non-profit provider. Interactive radio instruction—which has already been introduced for ALS in some areas—and cellphone-supported learning are needed to reach the most remote students. Multi-modality remote learning using non-face-to-face means such as TV, radio and cellphones would allow flexibility and equitable access to high quality education.

Promoting innovation and digital adoption

Apart from establishing a sound regulatory framework and leading by example, governments can also use policy to promote digital adoption. The digital economy can grow only if consumers and companies make use of digital technologies in various aspects of their daily operations or activities. Low levels of digital adoption among consumers will limit the growth of businesses that provide digital services. Countries with regulations that discourage business from undergoing digital transformation will eventually hurt their economies as local firms would be outperformed by more efficient competitors abroad.

In the Philippines, there is a large bias in innovation towards science and technology, suggesting that a rebalancing of the policy mix is needed towards business innovation. The features of the MSME Development Plan place priority on increasing business capacity of SMEs, particularly through its Enhanced Management and Labor Capacities and its Improved Access to Technology and Innovation components. However, most of the resources remain skewed towards scholarships, channeled through universities to benefit individuals. There is also a tendency to frame technology transfer in terms of facilitating transfer from own public research organizations (PROs) and not necessarily from cheaper and more efficient technology in the market. This might be reflected in the low levels of adoption of existing technologies. For instance, only 9 percent of firms in the Philippines have internationally recognized quality certifications and only 11 percent of firms use technology licensed from foreign companies, lower than in most peer countries.

Figure 7.1. Philippine firms lag in technology adoption



Source: Growth and Productivity Report. * Only for manufacturing firms

As part of the COVID-19 recovery, a rebalancing of the policy mix should also include greater efforts on technology adoption. The private sector will need to use technology such as digital payments and e-commerce platforms to operate in the new normal. A program effectiveness review analysis carried out by the World Bank in 2019 analyzed the private sector support programs from DTI and DOST, which can be used to assess how the current policies are aligned with the potential support under the new normal. Bringing new technology into a firm requires changes in business practices and processes. This provision is covered by programs that support management practices, which represented over 11 percent of policy support resources in 2017 (Figure 7.2). Thereafter, firms can then bring in the technology. Support to non-R&D innovation, technology adoption/ diffusion represents only three percent of the private sector support. A policy mix rebalance might be required to support Filipino firms to adjust to the new demands from the market by leveraging digital solutions that support social distancing.

Figure 7.2 Government programs supporting technology adoption only represent three percent of the overall resources

Source: World Bank, 2019

Addressing coordination problems is also key in increasing digital adoption. Under the presence of network externalities, capabilities are necessary, but not sufficient to foster technology adoption, as the main binding constraint is often associated with coordination problems. At an early stage of the platform's lifecycle, when both sides of the market are still thin, impatient users may be reluctant to make the initial investments to connect if they assume others will do the same, even when they would all be better off by coordinating adoption. Therefore, policy interventions should be designed to overcome the coordination failure, for example by introducing open interfaces (e.g. standard QR codes for digital payments) and data transferability (Ruutu et al., 2017).

Whole-of-government approach

The development of digital economy strategies requires close collaboration with multiple stakeholders. The digital economy permeates several areas of society such as ICT, energy, education, finance, customs, and business registration. Given its multi-faceted nature, planning and implementing strategies for the digital economy does not naturally fall into the hands of a single government entity. The complementary nature of its building blocks means that piecemeal efforts of separate national agencies are not adequate. Instead, it requires a 'whole-of-government' coordinated approach, involving the participation of the different entities that are part of the digital economy ecosystem.

Vision and institutional setup

The whole of government approach can take different institutional forms. Based on global examples, institutional arrangements range from single entities (for example, Malaysia and Thailand) and units directly under the highest government office (for example, Singapore), to government-wide efforts led by the Ministries of Economy (for example, Germany). The examples below illustrate how these countries arranged their institutional set-up.

Box 7.1. Whole of Government Approaches to Develop the Digital Economy

In **Malaysia** the Malaysia Digital Economy Corporation, part of the Ministry of Communications and Multimedia, leads the digital economy efforts. The government is currently preparing its first Digital Economy policy. Ministries and MDEC have prepared multiple policies and roadmaps including: National Industry 4WRD Policy (Ministry of International Trade and Industry), National eCommerce Roadmap, National Big Data Analytics Framework, and the Malaysia Innovation Policy Council.

In **Thailand**, the Ministry of Digital Economy and Society was established in 2016 to replace the Ministry of Information and Communication Technology. Within the new Ministry, it established a Digital Economy Promotion Agency with the goal of promoting and supporting digital adoption and innovation.

The Smart Nation and Digital Government Office (SNDGO) drives the transition of **Singapore** into a digital economy. It is directly under the Prime Minister's Office, comprising staff from the Digital Government Directorate of the Ministry of Finance, the Government Technology Policy department in the Ministry of Communications and Information, and the Smart Nation Program Office. The SNGDO takes a collective approach in by building long-term capabilities for the public sector and promoting adoption and participation from the public and industry. Their government's vision is reflected in Smart Nation: The Way Forward.

In **Germany**, the Federal Ministry for Economic Affairs and Energy steers the country's digital transformation. Nonetheless, last decade, the government established a cross-departmental steering committee, which also included the Federal Ministry of the Interior and the Federal Ministry of Transport and Digital Infrastructure. The current implementation strategy "Shaping the course of digitization" was then released as a federal government-wide document.

In the Philippines, the Department of Information and Communications Technology (DICT) leads the government's connectivity and e-government agenda. In 2016, the DICT was established as the government's primary policy-making, planning, and implementing body tasked with the development and promotion of the national ICT agenda. Although it is part of DICT's mission to lead the country's transition to a digital economy, the department currently focuses on three key areas: (1) expansion of the national ICT infrastructure, (2) e-governance, and (3) reforms in the policy and regulatory frameworks (DICT, 2019a). These areas are in line with the priority strategies outlined in the Philippines Development Plan 2017-2022. Attached to the DICT is the National Telecommunications Commission, an agency responsible for the regulation of all the telecommunications services in the country. Other attached agencies include the National Privacy Commission, and the Cybercrime Investigation and Coordinating Center.

In addition to the efforts being made by the DICT, various government bodies have also been taking steps to integrate the digital economy agenda with their own mandates. The government agencies involved, together with their corresponding efforts, are discussed in the succeeding points.

Digital transactions. To stimulate the adoption of digital payments, the BSP is currently implementing initiatives under the National Retail Payments System (NRPS) framework. In addition to the establishment of InstaPay and PESONet, one of the latest initiatives implemented is the launching of an online payment facility for government transactions called 'eGov Pay' (Agcaoili, 2019). Another initiative being advocated is the full adoption of a national QR code standard for all payment service providers, which will enable micro-merchants to accept digital payments and allow greater convenience in transactions. The BSP, in collaboration with the Philippine Statistics Authority, is also preparing for the roll-out of national IDs, which is expected to improve the degree of financial inclusion in the country. The Bureau of Internal Revenue (BIR), under the DOF, is currently exploring ways on how to properly tax online transactions (Padin, 2019). Although the BIR requires online services to pay taxes, collecting revenue from the industry is difficult since not all sellers or service providers issue receipts for online transactions. The BIR, in partnership with the government of Korea, is also developing an e-invoicing system with the goal of optimizing business and tax processes.

E-commerce. The DTI is leading initiatives to promote e-commerce. DTI is currently preparing a new e-commerce roadmap that will aid the department in reaching its target of 500,000 MSMEs utilizing e-commerce by 2022 (Desiderio, 2019).

Business climate. The Anti-Red Tape Authority (ARTA) leads the government's efforts in improving the ease of doing business across the country. One of its major initiatives is the establishment of the National Business One Stop Shop (NBOSS). NBOSS aims to streamline the business registration process through co-location of the offices of the Securities and Exchange Commission (SEC), BIR, Social Security System (SSS), Philippine Health Insurance Corporation (Philhealth), and the Home Development Mutual Fund (Pag-IBIG). With the help of the DICT in implementing its initiatives, ARTA (2020) projects that starting a business can improve from 13 steps in 33 days (as cited in the Doing Business 2020 Report) to 9 steps in 7.5 days.

Innovation. DTI, DOST, and DICT have prepared an Inclusive Innovation Industrial Strategy (i3s). As part of this initiative, DTI has prepared Innovation, Digitalization, and Digital Transformation projects to contribute to the Digital Economy. DTI plans to implement the Innovation for Regional Inclusive Innovation Centers (RIICs), Industry, and, Startups (IRIS) program, with the primary objective to help foster inclusive and sustainable industrial development in the Philippines. Programs will be designed to build and strengthen the innovation and entrepreneurship ecosystem in the regions, facilitate the adoption of Industry 4.0 technologies among firms, and support the growth and development of the country's startups and ecosystem for startups. Lastly, in response to COVID-19, DTI is promoting innovation and digital adoption through webinars in partnership with Google Philippines, US-ASEAN Business Council, VISA and the Philippine Trade Training Center.

Skills and education. The Department of Education (DepEd, 2019) supports the integration of ICT skills into the K-to-12 curriculum primarily through its Digital Rise Program. The program focuses on developing digital literacy skills as early as Grade 4, enabling ICT-assisted teaching and learning, and automating DepEd's operational processes. To support these goals, DepEd will ensure the availability of computer laboratories and digital classrooms, provide access to e-learning resources, train students on data protection and cybersecurity, and guarantee that all DepEd offices and schools are connected to the Internet. DepEd (2017) has also incorporated a Digital Literacy learning strand into the Alternative Learning System curriculum to reach students who are not receiving formal education. The DOST also launched the Smarter Philippines Through R&D, Training and Adoption (SPARTA) program, which will train 30,000 scholars in data science and analytics (Arayata, 2020). The Technical Education and Skills Development Authority (TESDA) leverages digital technologies to deliver their services to a wider range of audiences. It created an online program which enables Filipinos to access ICT courses (among others) at the comfort of their own homes or workplaces (TESDA, 2018). TESDA also introduced a mobile application that provides users information on the different technical-vocation education and training programs being offered by the agency (Arayata, 2019). In 2019, the BSP partnered with

E-PESO, a USAID-funded program, to launch a digital literacy program that aims to increase trust and confidence in the security of digital payments and other financial transactions (BSP, 2019). The DTI also provides seminars and workshops that train MSMEs how to expand their businesses through e-commerce. Finally, the government's Tech4ED program aims to provide practical digital skills training particularly to out of school youth, senior citizens, women and indigenous people across the country. Of the 54,435 members currently enrolled in the platform, 57.8 percent are women (Francisco, 2017).

Data protection and cybersecurity. The Office of Cybercrime within the Department of Justice (DOJ) is responsible for law enforcement investigation and prosecution strategies in curbing cyber-related offenses in the country. The National Privacy Commission implements provisions of the Data Privacy Act of 2012 and ensures compliance of those who handle data with international standards set for data protection. The Commission makes use of an online complaints system that makes it easy for complainants to submit reports on privacy breaches and other related incidents. The DTI is in charge of educating consumers on how to safely navigate online markets, and enforcing laws to protect consumers against unfair practices.

Coordinating government's efforts

There is a need to rethink the institutional arrangements of the digital economy to switch from individual efforts to a coordinated strategy and implementation. Although the DICT has made substantial efforts in maintaining dialogue with various sectors in the economy, its mandate might be too broad to allow full engagement with all stakeholders. The Philippines can learn from the experience of its regional peers such as Singapore, Thailand, and Malaysia, where a joint or independent entity dedicated to the digital economy agenda works hand in hand with the private sector and other government agencies. Germany's approach of assigning the digital economy agenda to its Ministry of Economy is also exemplary as it acknowledges that the digital economy is a major subsector of the entire economy and that an oversight agency is better placed to coordinate the efforts that will be implemented by other line ministries.

Digitalizing the new normal for a faster recovery

Increasing digital adoption is hampered by expensive and unreliable internet connectivity, low use of digital payments, and difficult logistics. Despite paying relatively higher costs than its regional peers, Filipinos suffer from slow and unstable Internet. Constraints in logistics prevent both consumers and businesses from fully embracing e-commerce. The reliance of most Filipinos on cash, partly due to the lack of awareness and trust in digital financial solutions, narrows the possible economic opportunities they can engage in. The COVID-19 pandemic has highlighted these issues as firms, households, and the government faced challenges in digitalizing fundamental operations, performing essential activities, and providing social assistance to the sectors severely affected by the pandemic. Nonetheless, unequal access to the Internet has emphasized the country's digital divide, forcing most schools and businesses to temporarily suspend online classes and operations. The use of cash in carrying out transactions and distributing government aid to beneficiaries has resulted in inefficiencies and procedures where social distancing might be difficult to observe (for example, long lines, door-to-door distribution).

Policy recommendations

This is the time to implement reforms that have been in preparation during the past decade, which can lower internet costs, broaden economic opportunities, and increase social inclusion. The need to increase digital adoption by public and private sectors is critical not only in helping the Philippines adapt to the post-COVID-19 world, but also to leapfrog toward its Ambisyon Natin 2040 dream. The government must therefore urgently take an active role in creating and implementing an enabling policy and regulatory framework through priority reforms that reduce the digital divide, reduce logistic costs, promote the use of digital payments, and create a more conducive business environment (Table 7.1)

Table 7.1. Policy Recommendations

Time Horizon	Policy Recommendations	Responsible Agency
	DIGITAL INFRASTRUCTURE	
Immediate term	• Coordinate and fast track procurement of internet services for government offices and critical facilities (for example, health centers, hospitals).	All government agencies
	• Amend the Public Service Act (PSA) to lower barriers to entry for foreign investments.	Congress
	• Issue common infrastructure policies to speed up the rollout of mobile network infrastructure.	DICT
	• Issue executive directives on spectrum management and competition for frequencies.	DICT
Short term	• Ensure a fair and level playing field for operators by applying the same service obligations and performance standards for the third telco to the incumbent telcos.	DICT, NEDA, PCC
	• Fast-track and lower the cost of deploying broadband infrastructure through infrastructure sharing policies that address: (a) the use of government assets (submarine cable, NGCP dark fiber); (b) the use of infrastructure across sectors such as roads, railways, electricity trans mission; and (c) coordinated build for a shared utility corridor.	DICT, DPWH
	• Reconsider direct government investment in network infrastructure and operations; and develop transition plan, including regulatory framework for open access and non-discriminatory pricing, for NBN and Free Wifi programs to be transitioned to the private sector.	DICT, PCC
	• Pass joint memorandum circulars on streamlining of permits for cellular towers and cable laying within six months, while streamlining permit requirements for network deployment and rationalize fees imposed by national and local government agencies, as well as private sector associations within the short to medium term.	DICT, ARTA, DILG, DHSUD, DOE, DPWH
Medium term	• Amend the Radio Control Law and/or the Public Telecoms Policy Act, and pass the Open Access in Data Transmission bill and the guidelines to clarify spectrum assignment, recall, and reassignment.	Congress
	• Amend EO No. 467 to liberalize access to satellites for internet connectivity to help address digital infrastructure gap in the countryside.	Office of the President
Long term	• Prepare for 5G which will be a game changer in terms of facilitating digital adoption across sectors.	DICT, NEDA
	DIGITAL PAYMENTS	
Immediate term	• Maximize the usage of payment system infrastructures and payment services including private sector payment service providers in delivering emergency subsidy payments digitally.	DOF, DTI, DSWD, BSP, DICT
	• Establish a strong consumer protection framework including grievance mechanisms, and a return and refund policy.	DTI
	• Implement e-invoice and e-receipt to make transaction digital from end to end.	DTI, BIR, DICT
	• Mandate government agencies to make and receive payments digitally to the extent possible.	NEDA, DOF, DBM, ARTA, BTr, BIR, COA
Short to medium term	• Expand the financial literacy program in partnership with other stakeholders, covering digital financial services and digital literacy.	BSP
	• Accelerate QR Code-enabled merchants for wider acceptance of digital payments.	BSP
	• Implement the PhilSys in a timely manner for the delivery of public services, social safety net, and access to financial services.	PSA
	• Expand the participating government agencies under the EGov Pay facility as well as PESONet participating payment service providers.	BSP, all government agencies

Long term	•	Promote the use of electronic payments through NRPS, and crowd in private sector entities to facilitate the expansion of ACHs with multiple payment instruments and innovation.	BSP
	•	Strengthen cybersecurity and data privacy regulations to manage the risks of adopting digital financial technology.	DICT, BSP
	•	Pass the Financial Consumer Protection bill including a consolidated ombudsman for financial services.	Congress
LOGISTICS			
Immediate term	•	Implement public-private information campaigns among SMEs, especially those outside the major cities, about logistics services to encourage them to explore the potential of e-commerce trading.	DTI
	•	Provide support for SMEs to adopt e-commerce options.	DTI, DOST, DICT
Short to medium term	•	Pass the PSA amendment to clarify the legal status of foreign ownership restrictions in the logistics sector.	Congress
	•	Implement the CMTA provisions for e-commerce goods, adopting the WCO recommendations in its E-Commerce Package that includes the Framework of Standards, Technical Specifications, Immediate Release Guidelines, and other documents and tools supporting its implementation.	BOC
	•	Fix clearance processing between PHLPost and BOC, particularly for goods destined for places outside the NCR.	PHLPost, BOC
	•	Continue efforts to modernize Customs processes through automation.	BOC
Long term	•	Revitalize PHLPost as an important anchor for the small parcel delivery logistics industry, especially for remote and isolated communities.	DOF, PHLPost
	•	Encourage logistics companies to upgrade their facilities, transportation assets, and ICT infrastructure and systems, through assistance and access to long-term financing with low interest rates.	DTI
	•	Review and align with operational realities the transition and transfer of oversight and control functions over postal service providers from the DOTC, PHLPost, NTC, and now DICT.	DICT
DIGITAL TAXATION			
Short to Long term	•	Obtain more precise data to allow for assessment of the tax revenue lost as a result of the current low value consignment exemption from VAT and the potential yield from its reduction, or abolition.	DOF, BIR
	•	Identify what data is available about the consumption of digital services by consumers in the Philippines, and enter into dialogue with the industry to assess the scale of the market and future trends. That could be part of an overall consultation about changes to the VAT treatment of imports.	BIR
	•	Develop an appropriate legislative model that can be translated into provision in the Philippine Tax Code, and compliance strategy to support the policy changes and BIR and BOC that can be best integrated into their current operations.	DOF, BIR
COMPETITIVE BUSINESS ENVIRONMENT			
Immediate term	•	Require government agencies to accept scanned documents, digital photographs, and digital payments as legal equivalents in the processing of permits, licenses, and taxes.	BIR, COA, BTr, BSP
Short to medium term	•	Pass the PSA amendment.	Congress
	•	Pass Executive Order on the National Competition Policy.	Office of the President
	•	Prepare teachers and school leaders for multiple learning delivery modalities and learning resources.	DepEd
Long term	•	Embed socioemotional skills in the curricula of the extended compulsory education from kindergarten to grade 12 by explicitly stating objectives and targets and by preparing the teachers for effective delivery of content.	DepEd

What are the payoffs of reforms?

Digital reforms can help the economy become more competitive. Digital technologies can increase the productivity of businesses, and the efficiency of the government. They can enhance coordination and automate processes in a way to increase operational efficiency and reduce costs. These technologies can replace existing factors of production like labor or non-ICT capital the way travel agency is replaced by online airline booking system; or augment the factors to make them more productive like workers using technology. They can also deliver economies of scale and platform contributing to greater organization and collaboration among economic agents. The Philippines can learn from other countries. In Turkey, firms using the internet for online orders or reservations are 11 percent more productive, 25 percent larger, and twice more likely to export. Government's using one-stop computerized service centers and online portal have improved service efficiency. For example, Malaysia's introduction of an online registration system for Goods and Service Tax reduced the time to start a business by 10 days in 2019.

Digital reforms can also help the Philippines become more resilient. The transition to a digital economy will make the country more resilient to external and natural shocks like the COVID-19 pandemic. Digital technologies will help the country address the pandemic and the new normal by facilitating social distancing while maintaining engagement and communication. It can support work-from-home arrangements, distance learning, and offsite service delivery, avoiding business disruptions and ensuring service continuity. Digital payment solutions facilitate contactless transactions on online payments and fund transfers that would be more effective than the traditional banking experience. Reform efforts can ensure the government reliable systems for efficient and transparent public service delivery, which can be used to deliver cash aid and other services to disaster-prone country like the Philippines.

Digital reforms can finally help the Philippines be more inclusive. Digital technologies can make development more inclusive through information sharing, facilitating search-and-matching, and providing service deliveries to those previously unreached and unserved. Online jobs markets are able to connect employers with job applicants, while e-commerce platforms connect Filipino sellers from urban or rural areas to buyers in local and foreign markets. These technologies can also stimulate new business models and provide new avenues for activities away from their traditional domains. Massive open online courses offer learning opportunities for Filipino students at the click of a button, while local microfinance companies offer lending services through mobile applications. Leveraging these digital technologies can help deliver inclusive development by widening economic opportunities for everyone.

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